User's Manual

DXA250 DAQManager

vigilantplant.®

YOKOGAWA
Yokogawa Electric Corporation

IM 04L47B01-01EN
4th Edition

Thank you for purchasing DAQManager. This user's manual explains the operating procedures of the DAQManager software. To ensure correct use, please read this manual thoroughly before beginning operation. After reading the manual, keep it in a convenient location for quick reference whenever a question arises.
Adobe Reader 7 or later by Adobe Systems Inc. is required to view the manual.

Notes

- The contents of this manual are subject to change without prior notice. And, the actual screen display contents may differ somewhat from the screen display contents shown in this manual.
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Revisions

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4th Edition:	June	2010

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How to Use This Manual

Structure of the Manual

This User's Manual is composed of the following chapters 1 to 5 and an index.

Chapter	Title	Content
1	Outline of DAQManager	Explanation of the Outline of DAQManager The personal computer environment required for use of DAQManager, the system structure, the operation flow of DAQManager, the start and end procedure, etc. are explained.
2	File Management Functions	File import/export, file deletion, file backup, the consistency check method, etc. are explained.
3	Data Search Function	Data File Search Method are explained. Search method specifying a folder name, a file date, an extension, a data type, characters, a serial No., etc., display method for the search results, method for adding a channel to data, etc. are explained.
4	Data Display Methods	The display method for the searched data is explained. Waveform display, digital value display, cursor value display, calculation result display, saving of display settings, data form conversion, printing contents and procedures, etc. are explained.
5	Troubleshooting	Error messages and their estimated causes, as well as countermeasures are explained. The limitations for use of DAQManager and caution items are also listed.
Index		The index is listed alphabetically.

Scope of the Manual

This manual does not explain the basic operations of your PC's operating system (OS). For information regarding the basic operations of Windows, see the user's guide that came with Windows.

Screen displays explained in this manual

The screens used in this manual may differ from the actual screens depending on OS differences, software releases, etc.

Conventions Used in This Manual

Unit

K Denotes 1024 Example: 100 KB
M Denotes 1024K Example: 10 MB
G Denotes 1024M Example: 2 GB

Bolded Items

Items set in boldface mainly refer to on-screen interface elements such as menus, commands, dialog boxes, and buttons, or keys on the keyboard.

Symbols used in operational explanation

In the pages explaining operation (chapter 1 to 4), the following symbols are used to distinguish the descriptions.

Procedure Carry out the procedure according to the step numbers.
All procedures are written with inexperienced users in mind; depending on the operation, not all steps need to be taken.

Explanation Explanation gives information such as limitations related the procedure.

Note Calls attention to information that is important for proper operation of the instrument.

Revision Information

Title : DXA250 DAQManager User's Manual
Manual No. : IM 04L47B01-01EN

Edition	Issued date	Revision information, software release number
1st Edition	May 2009	Newly published, R1.01
2nd Edition	August 2009	Corrections, and additions of descriptions. R1.02
3rd Edition	March, 2010	Added new functions, support for DXAdvanced R4 (/AS1 function not supported). R2.01.01
4th Edition	June, 2010	Added support for Windows 7, restrictions, and caution items. R2.02.01

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1.1 Overview of Functions

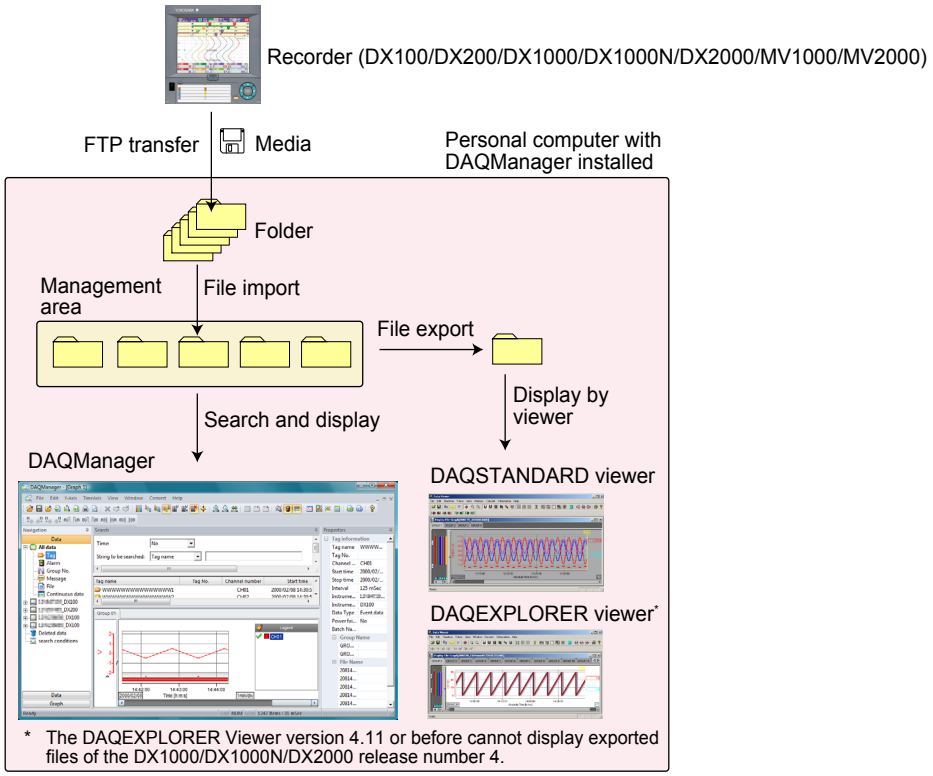
DAQManager is the software for management, search, and display of data files collected by DXAdvanced (DX1000/DX1000N/DX2000), DX100/DX200, MVAdvanced (MV1000/MV2000), and FX100. The data can be classified by equipment and correspondence to up to 300 units is possible. The target data can be searched easily by specifying an equipment name, a tag name, a period, a text string, an alarm type, etc., and data can be displayed. Waveform display is possible simultaneously for up to 100 channels, and waveform data of different units can be displayed by the same viewer (waveform display screen). Data files can also be converted to Excel or to text.

DAQManager is compatible with the following data files.

- DXAdvanced (DX1000/DX1000N/DX2000) display files and event files
- DX364 display files and event files
- DX100/DX200 display files and event files
- MVAdvanced (MV1000/MV2000) display files and event files
- FX100 display files and event files.

  In this manual, DXAdvanced (DX1000/DX1000N/DX2000), DX364, DX100/DX200, MVAdvanced (MV1000/MV2000), and FX100 are represented as recorder.

Image of the DAQManager Function Outline



Explanation of Terms

Term	Explanation
File import	Data registered by recorder are acquired to the management area and index information is created. Import can be performed automatically or by manual operation. In case of automatic import, specification of a folder causes periodic monitoring of that folder. In case of manual import, the specified file or folder is acquired to the management area.
File export	The files in the management area of DAQManager are put out to a specified folder. The exported file can be displayed as a waveform with the viewer of DAQSTANDARD or DAQEXPLORER of our company.
Management area	DAQManager copies files to a specified area. Up to 10 of these areas can be created. All imported files, index information, equipment information, and graph information are saved in the management area. When a management area is deleted, these information are also deleted.

File Management Functions

File import, file export, file deletion, data backup, and editing of the management area can be done.

DAQManager has areas for file saving and management. The management area is composed of a management folder for saving of data files and index information for all data files in the management folder. The management folder is at the following location. **Never change it.**

<InstallDrive>:\Yokogawa Electric Corporation\DAQManager

Do not use Windows Explorer to move or delete data files in the management area. When these files are moved or deleted, the data files are displayed in lists, but the waveforms are not displayed.

File Import

Data files are copied to the management folder managed by DAQManager, and index information is created. Import can be performed automatically or by manual operation.

Automatic import:

A specified folder is monitored periodically, and any not yet imported files are imported automatically. A folder which is a monitoring object is called a watch folder. There is a function for automatic import that automatically converts the files to Excel/text format. The converted data is created in the folder containing the imported file.

Manual import:

A specified file or folder is acquired manually to the management area.

Please refer to the following for the approximate number of files which can be imported.

If a DX unit creates one file (a file with 10 alarms and 10 messages) per day, the files of 100 DX units for 2.7 years can be imported. Note that the number of importable files differs depending on the set number of groups and channels. Importing from up to 300 instruments is possible, but importing is not allowed if the file capacity reaches the upper limit.

File Export

Required files are copied out from the management area. The exported files can be displayed with the viewer software of DAQSTANDARD or DAQEXPLORER* of our company.

* The DAQEXPLORER Viewer version 4.11 or before cannot display exported files of the DX1000/DX1000N/DX2000 release number 4.

File Deletion

A data file in the management folder is deleted. The index information concerning the deleted data file is also deleted.

Data Backup

All data files and index information in the management folder are copied as backup data to a specified folder. The file management information for backup data can be read and restored by DAQManager.

Check of the Management Area

The consistency of the data files in the management area and the file index information is checked. In case of no consistency, repair is possible by editing the management area for reconstruction.

Conversion of watch folder data

Watch folder data is converted to Excel or text when it is automatically imported.

List Display Function

Lists of tags, alarms, display groups, messages, files and continuous data are displayed. Waveform display is made in specified data sets or entire file, and specified data can be added to an existing waveform display screen. Data displayed as waveforms can be displayed as digital values. Lists can be sorted in the order of the displayed items.
The list display types are shown below.

Equipment List Display

The equipment names (equipment serial No., type name) for which data have been collected are displayed in the navigation window.

Tag List (channel list) Display

A tag (tag name, tag No., channel name) list is displayed.
Tags are handled as a list for one system, delimited by start and stop. A tag with the same name, but a different system (different recording start and recording stop section) is handled as a different tag.

Alarm List Display

A list of alarms is displayed.

Message List Display

A list of messages is displayed.

File List Display

A file list is displayed.
Files in the file list can be deleted or exported.

Display Group List Display

A list of display groups is displayed.
A display group list for one system delimited by start and stop is displayed.

Continuous Data List Display

A list of data retrieved between recording start and stop of a recorder is displayed. Batch files are also included in the list.

Data conversion by file

You can select any files from the file list for conversion to Excel or text.

Data Search Function

List Search Function

Restricted search for a displayed list is possible by specifying a text string or a time period.

- Search with specification of a time period
  “None”, “Date and time”, “Last xx Hour”, “Last xx Day”, “Last xx Month”, and “Last xx Year.” For [Date and time], enter a start and end date/time for the search period.
- Search with specification of a text string
  When a text string is specified, the object item differs according to the list type.
- Alarm search
  In case of an alarm list, search is performed by alarm type.

Search Conditions Saving Function

The search conditions are given a name and are saved. The saved search conditions can be used again to search.

Saving Waveform Display Conditions

The waveform display conditions are given a name and are saved. The saved display conditions can be used again to display a waveform again. In this manual, saved waveform display conditions are listed as a graph. The same applies for [Graph] on the DAQManager software display screen.
Graphs can be searched by save time or graph name text string.

Data Display Function

Data are selected from a searched list and waveform display is performed. Waveforms of different equipment or cycles can be displayed by the same viewer. Trend waveform display, alarm display, mark/message display, cursor value display, and section calculation display can be performed.
The information of the displayed data is saved as waveform display conditions. The waveform display conditions are called a “graph.”

Waveform Display

- Display is made in group units. A maximum of 50 groups can be displayed.
- A maximum of 100 tag waveforms can be displayed per group.
- The waveform from start to stop can be displayed with scrolling.
- Alarm show/hide can be selected.
- The time axis and the vertical axis (Y-axis) of the waveform can be magnified or reduced.
- Optional tags can be added and displayed.
- Marks can be added, deleted, displayed or hidden.
- Optional sections can be displayed.
- Two cursors are displayed.
- Cursor jump is possible to messages, marks, and alarms.
- Cursor value display (max. value, min. value) is possible on trend waveforms.
- Zone setting (full, automatic, slide, free mode) is possible for the vertical axis (Y-axis).
- Detail display is performed for the cursor value.
- Active tag information (properties) is displayed.
- One-page printing and one-page time specification printing are possible.
- A one-page arbitrary time span can be specified and printed.
- Conversion to Excel or text is possible for the cursor range or the entire range.
- Display of the start and stop section is possible without file linking.
- A bitmap image of the waveform display screen can be copied to the clipboard.

Digital value display

- Can be displayed in units of groups. Up to 50 groups can be displayed.
- Up to 100 tabs of waveforms can be displayed per group.
- Display/No display can be selected for alarms.
- Optional tags can be added and displayed.
- Two cursors are displayed.
- Active tags can be switched.
- The cursor range or the entire range can be converted to Excel or text.
- The cursor range or the entire range can be printed.
- Text strings can be copied to the clipboard.
- The cursor is linked with waveform and alarm displays.

Alarm Display

- Alarm occurrence time, alarm type, alarm status, and tag name are displayed.
- The cursor is linked with the waveform display.
- The cursor range can be printed.
- The cursor range can be converted to Excel or text.

Mark/Message Display

- Mark/message text strings and the time are displayed.
- The cursor is linked with the waveform display.
- The cursor range can be printed.
- The cursor range or the entire range can be converted to Excel or text.

Cursor Control

- Display is made in group units. A maximum of 50 groups can be displayed.
- Cursor values can be displayed for a maximum of 100 tags per group.
- The values for cursor A and cursor B and the difference are displayed.
- Printing is possible.
- Cursor values can be set to Translucent, Opacity, or No display.

Section Calculation Display

- Display is made in group units. A maximum of 50 groups can be displayed.
- The section calculation results for a maximum of 100 tags can be displayed per group.
- At the time of show cursor, the cursor section is calculated, and at the time of hide cursor, the entire section is calculated.
- Min. value, max. value, P-P value, mean value, and time are displayed.
- Printing is possible.
- Results of statistical computation over and area can be copied to the clipboard.

Print Function

Waveforms, digital values, alarm values, marks/messages, cursor values, and calculation results can be printed.
Printing is not possible for the list display of search results.

Waveform Printing

Printing is possible when the waveform screen is active. However, when tags for 11 or more axes are displayed on the same screen, Y-axis printing is not possible from the tenth axis on.
When a cursor value window or a calculation result window is displayed, the cursor values or the calculation results are printed on the same page as the waveform. When the print setting is for multiple pages, cursor value information and calculation results are printed on all pages.

Printing Digital Values

When the digital value screen is active, the cursor range or the entire range can be printed.

Alarm Value Printing

When the alarm window and the mark/message window are active and an alarm list is displayed, printing is possible.
The printing range is normally the entire range.

Mark/Message Printing

Printing is possible when the alarm window and the mark/message window are active and a mark list and message list are displayed.
The printing range is normally the entire range.

Cursor Value Printing

When the trend waveform screen is active and a cursor value window is displayed, printing is possible. The cursor values are printed on the same page as the trend waveform.
When the Y-axis covers at least one half of the paper onto which cursor values and calculation results are to be printed, the cursor values and the calculation results are not printed on the same page as the waveform, but on a different page.

Calculation Result Printing

When the trend waveform screen is active and a calculation result windows is displayed, printing is possible. The calculation results are printed on the same page as the trend waveform.
When the Y-axis covers at least one half of the paper onto which cursor values and calculation results are to be printed, the calculation results, the waveform and the cursor values are not printed on the same page as the waveform, but on a different page.

Other Functions

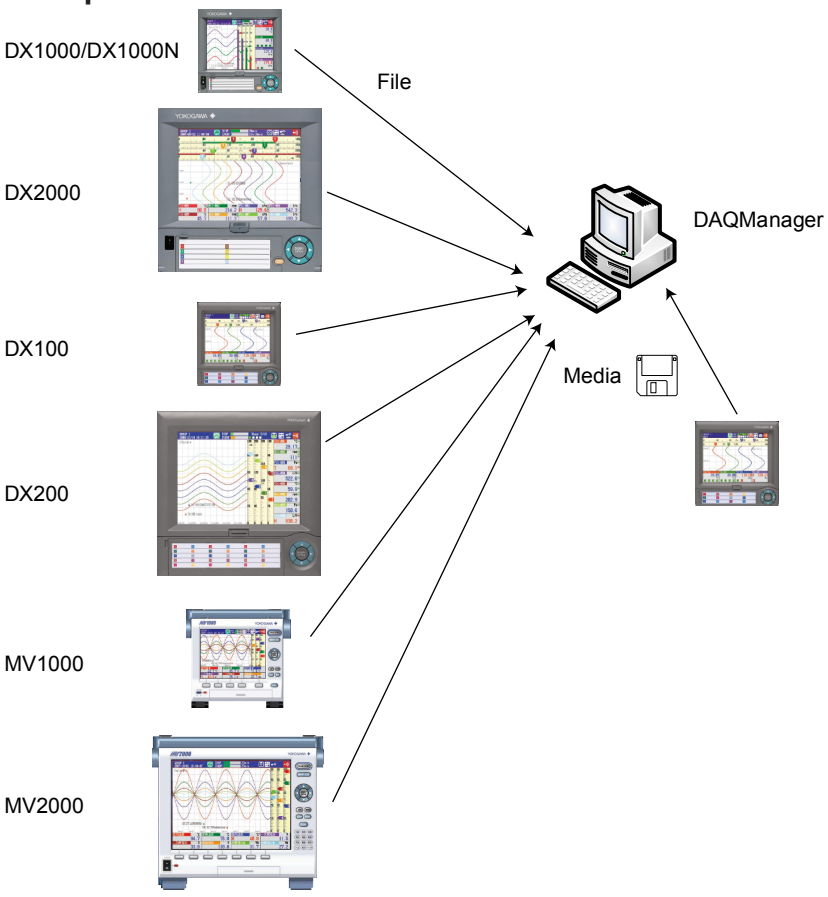
The following functions are provided.

- Data properties display function (file information, tag information, display group information, alarm information, message information, continuous data (batch) information)
- Data conversion function (Excel conversion, text conversion)
- A function for waveform display by file specification

Compatible Files

- DXAdvanced (DX1000/DX1000N/DX2000) display data files (extention: .dad) and event data files (extention: .dae)
- DX364 display data files (extention: .dad) and event data files (extention: .dae)
- DX (DX100/DX200) display data files (extention: .dds) and event data files (extention: .dev)
- MVAdvanced (MV1000/MV2000) display data files (extention: .dad) and event data files (extention: .dae)
- FX100 display data files (extention: .dds) and event data files (extention: .dev)

System Structure Example



DAQManager acquires files via the FTP function of DXAdvanced or DX100/DX200 or via external storage media and manages these files. However, DAQManager does not have communication functions such as an FTP server function etc.

1.2 Required System Environment

OS (operating system)

The following operating systems can be used.

- Windows XP Home Edition SP2, SP3
- Windows XP Professional SP2, SP3 (except Windows XP Professional x64 Editions)
- Windows Vista Home Premium SP1, SP2 (except the 64 bit editions)
- Windows Vista Business SP1, SP2 (except the 64 bit editions)
- Windows 7 Home Premium (32-bit and 64-bit versions)
- Windows 7 Professional (32-bit and 64-bit versions)

  The language displayed by the software under different language versions of the OS are as follows.

OS Language	Software Language
Japanese	Japanese
English	English
Chinese	Chinese
German	German
French	French
Russian	Russian
Korean	Korean

CPU, Processor

Pentium 4, 3 GHz or faster Intel x64 or x86 processor*

When Using Windows 7(64-bit edition): Intel x64 processor that is equivalent to Intel Pentium 4, 3 GHz or faster*

* Multiprocessor operation has not been confirmed.

Main memory

When using Windows XP: 1 GB or more (recommended) of RAM

When using Windows Vista,Windows 7: 2 GB or more (recommended) of RAM

CD-ROM Drive

Used for installation of this software.

Free Hard Disk Capacity

Free space: 200 MB or more

In addition to the above, an administration index area (max. 2 GB per management area) and an area for saving of data files are required.

File System

NTFS is recommended.

In case of FAT (FAT32), normal operation may not be performed when many files are managed.

Display

A video card that is recommended for the OS and a display that is supported by the OS, has a resolution of 1024×768 or higher, and that can show 65,536 colors (16-bit, high color) or more.

Printer/Mouse

Devices compatible with the OS are required.

Note

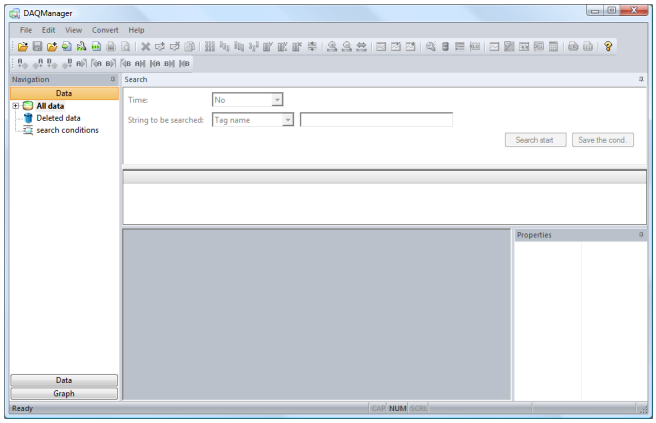
Do not change the time zone for a personal computer using DAQManager. The operation is not normal when the time zone is changed. If change is required, reconstruct the management area. Waveforms also is not displayed normally when a backup of the management area is restored to a personal computer with a different time zone. In this case, normal operation is also obtained by reconstruction. However, even in case of reconstruction when the time zone has been changed, graphs cannot be used normally.
Refer to Section 2.3. for reconstruction of the management area.

1.3 Start and Exit

Start

Procedure

Select **All programs > DAQManager > DAQManager** from the Start menu of Windows.
DAQManager will start.



Note

The search results at the time when DAQManager was ended the last time are not restored after a new start.

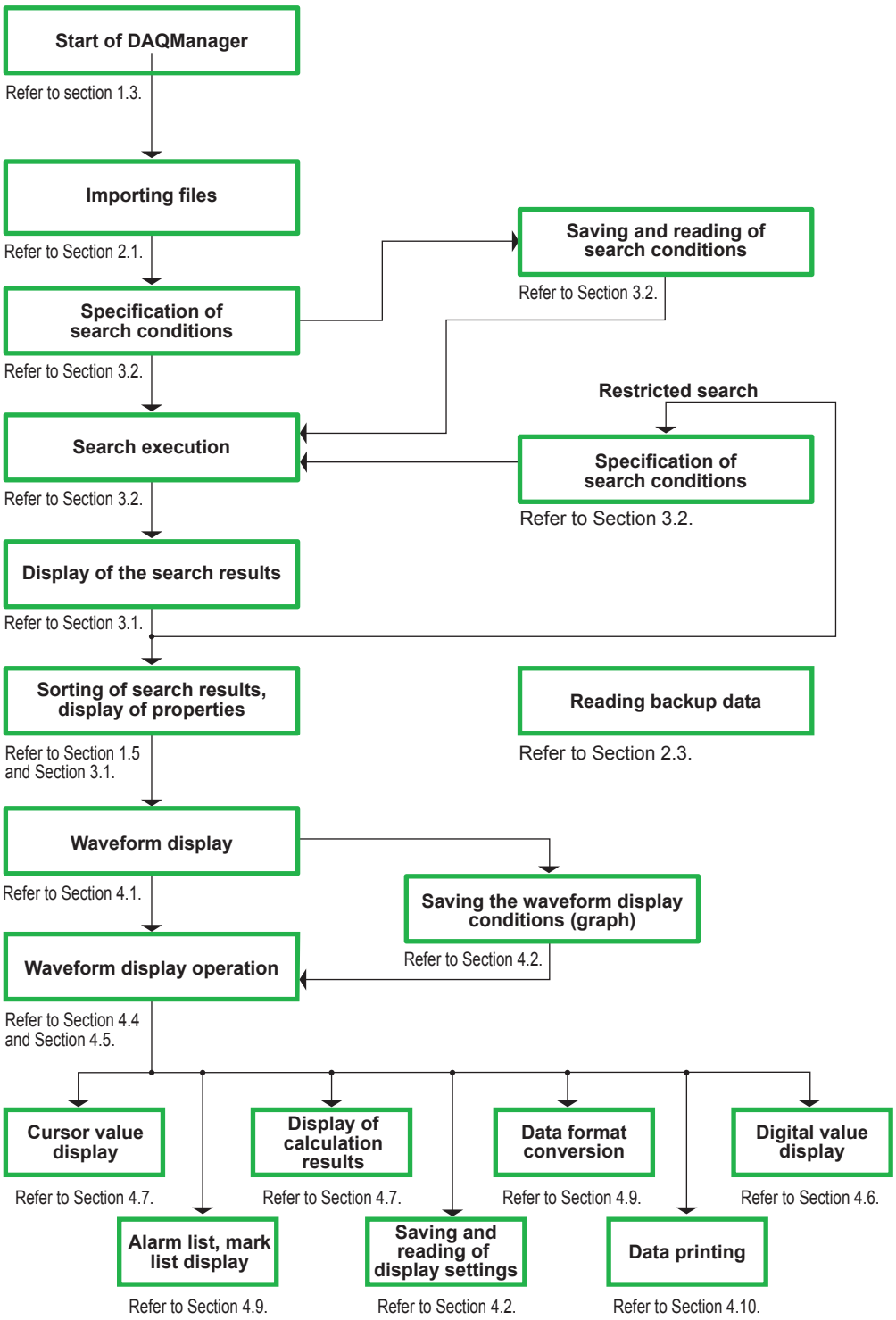
Exit

Procedure

Select **File > Exit** application from the menu bar or click [x] at the right end of the title bar of the window.
DAQManager is closed.

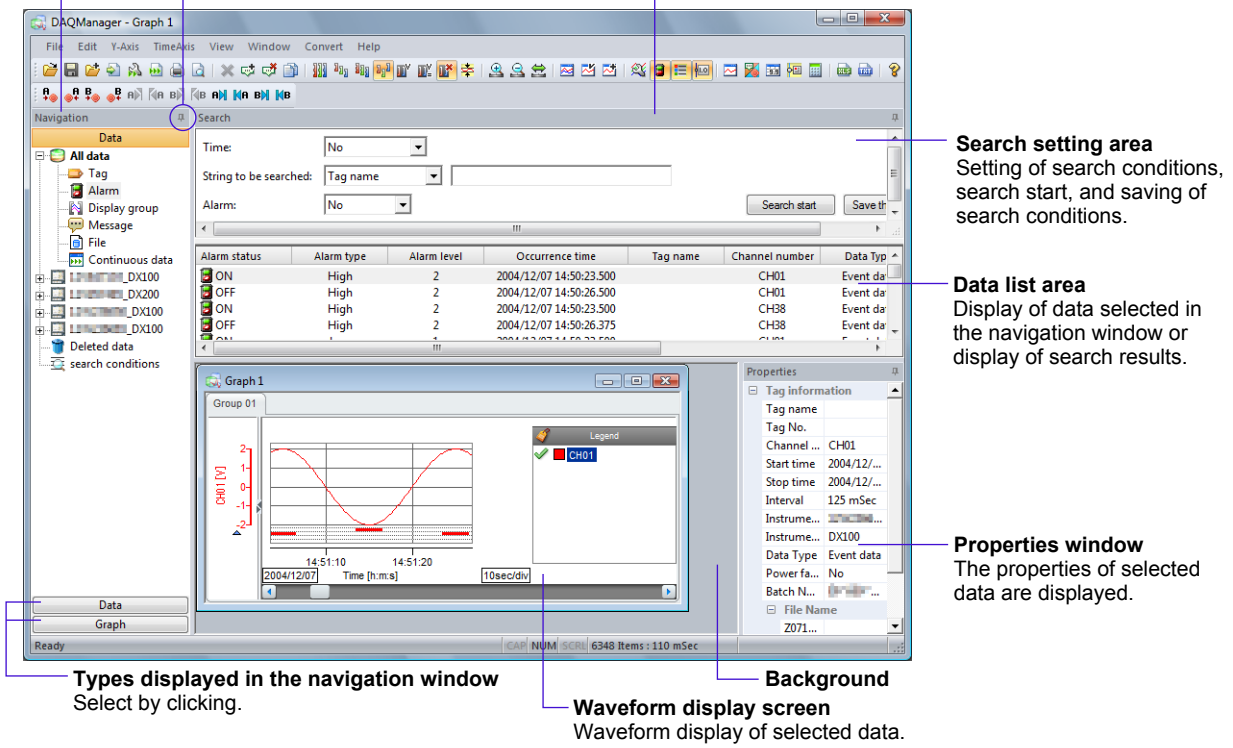
1.4 Operation Flow

The DAQManager operation flow is shown below.

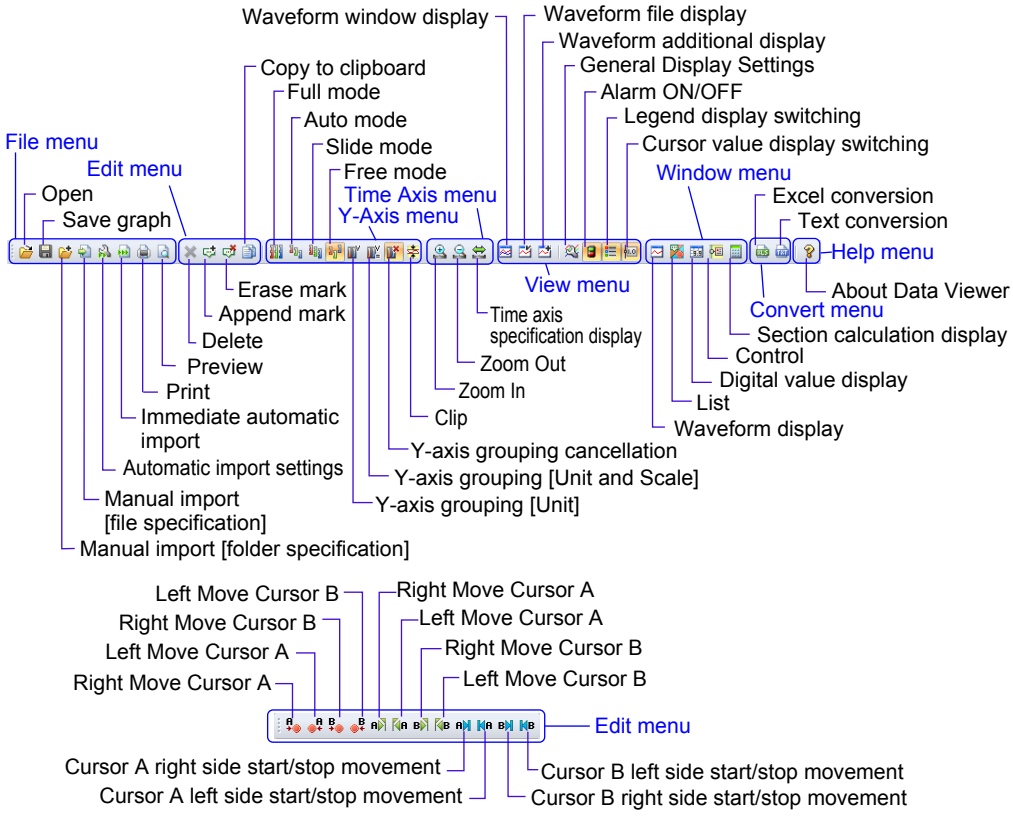

Start of DAQManager
Refer to section 1.3.
Importing files
Refer to Section 2.1.
Specification of search conditions
Refer to Section 3.2.
Saving and reading of search conditions
Refer to Section 3.2.
Search execution
Refer to Section 3.2.
Restricted search
Specification of search conditions
Refer to Section 3.2.
Display of the search results
Refer to Section 3.1.
Sorting of search results, display of properties
Refer to Section 1.5 and Section 3.1.
Reading backup data
Refer to Section 2.3.
Waveform display
Refer to Section 4.1.
Saving the waveform display conditions (graph)
Refer to Section 4.2.
Waveform display operation
Refer to Section 4.4 and Section 4.5.
Cursor value display
Refer to Section 4.7.
Display of calculation results
Refer to Section 4.7.
Data format conversion
Refer to Section 4.9.
Digital value display
Refer to Section 4.6.
Alarm list, mark list display
Refer to Section 4.9.
Saving and reading of display settings
Refer to Section 4.2.
Data printing
Refer to Section 4.10.

1.5 Names of Parts on the Main Screen and their Use

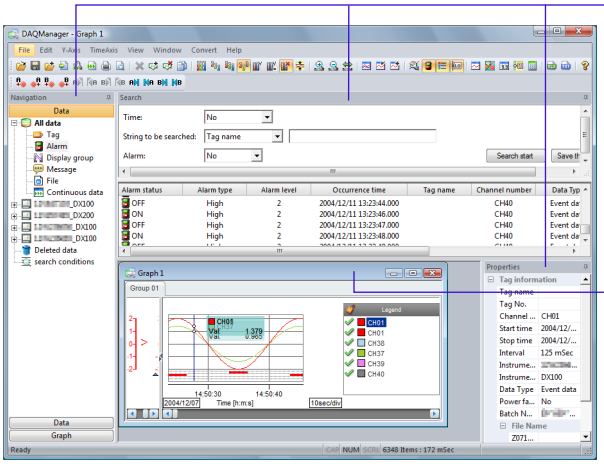
Names of the window parts


Navigation window
Drawing pin
The window is minimized when this is clicked.
Search window
Search setting area
Setting of search conditions, search start, and saving of search conditions.
Data list area
Display of data selected in the navigation window or display of search results.
Properties window
The properties of selected data are displayed.
Types displayed in the navigation window
Select by clicking.
Waveform display screen
Waveform display of selected data.
Background

Toolbar icons

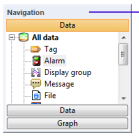


Window relocation

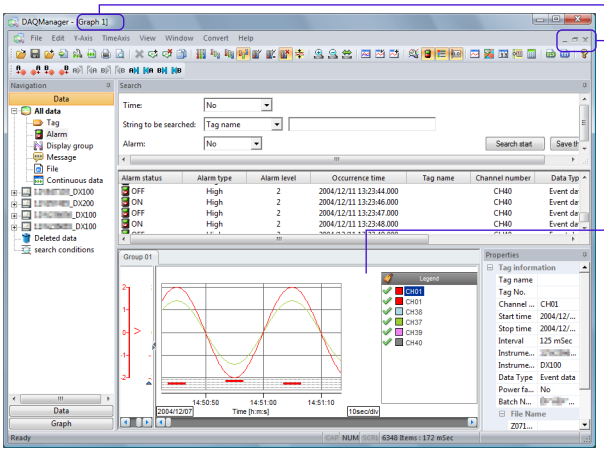


With double-clicking here or with dragging, the window is displayed independently

With double-clicking here, the waveform display screen is maximized and displayed on the background of the main screen

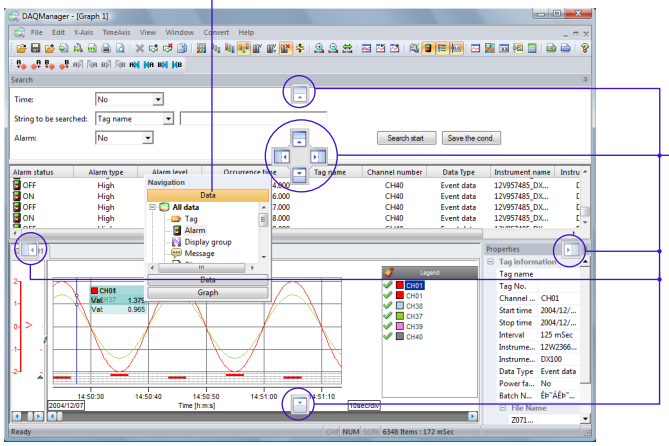


Example for independent window display
Return to the original display position is made by double-clicking here



Example for maximized display of the waveform screen
The waveform screen is maximized when the navigation window, the list window, and the properties window are minimized.

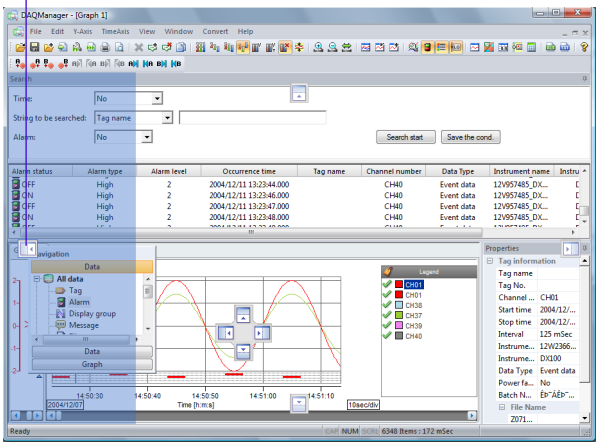
When an independently displayed window is dragged, guide arrows are displayed



Guide arrows

(Continued on the next page)

When an independently displayed window is dragged onto a guide arrow, the window relocation target is displayed in blue, and when it is dropped, the window is pasted to the blue display part

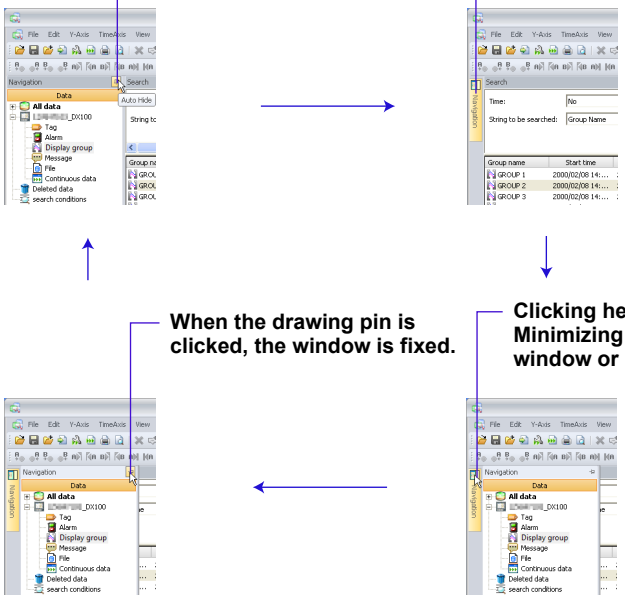


Drawing pin and minimized display

When the drawing pin is clicked, the window display is minimized. When a minimized window is clicked, it returns to the original display, and it is fixed when the drawing pin is clicked.

When the drawing pin is clicked, the window is minimized.

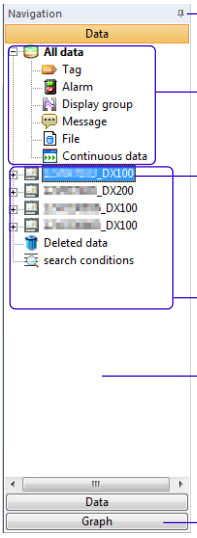
The window is placed with the orientation of the larger ratio in contact with top, bottom, left side or right side of the main screen.



When the drawing pin is clicked, the window is fixed.

Clicking here displays the window. Minimizing is performed when another window or background is clicked.

Navigation window display example



Drawing pin
Clicking here minimizes the window.

All imported data types

Imported equipment name
The serial No. of the equipment and the equipment name are displayed.
The equipment name can be changed by right-clicking and selecting "Change name."

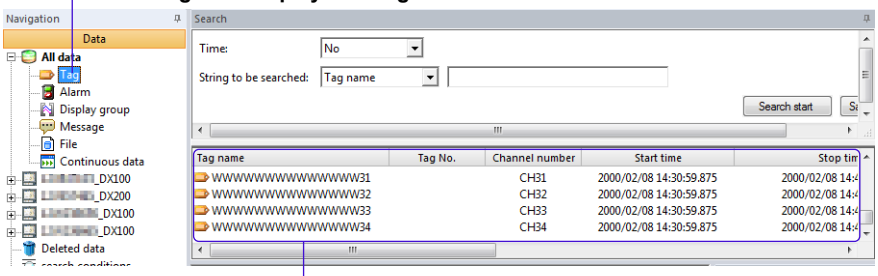
All imported equipment data types

When an item is clicked, the object data are displayed in the list window.

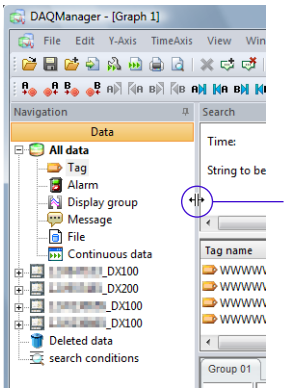
Graph display
When this is clicked, the graph name is displayed in the list window.

List display example when a tag is selected

Clicking here displays the tag list

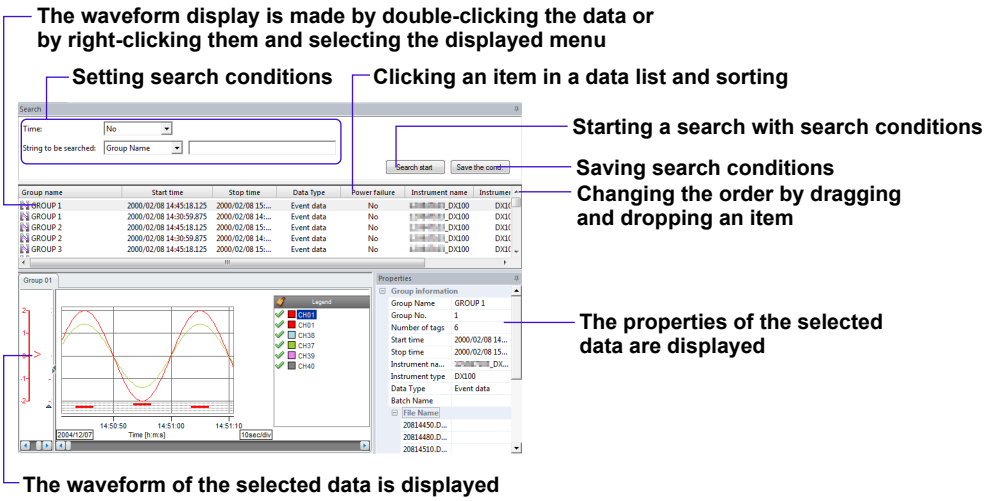


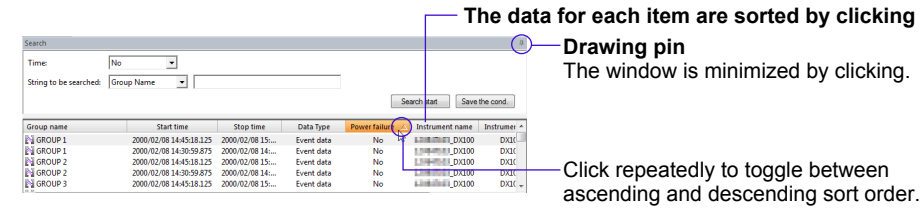
List display of tag data

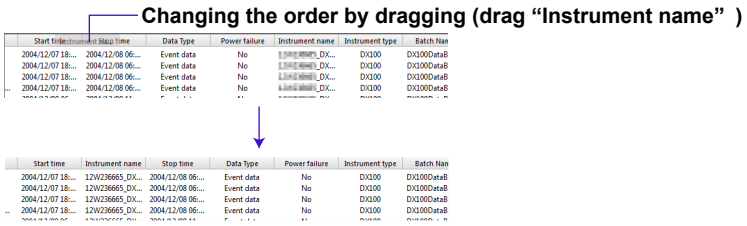


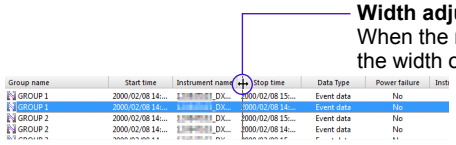
When the mouse pointer is moved and becomes this mark, the window size can be changed.

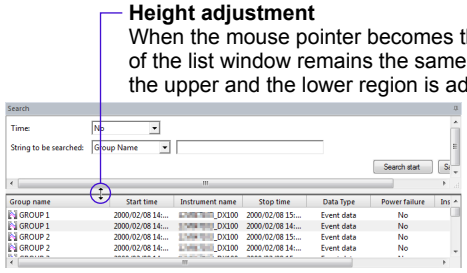
List window display example

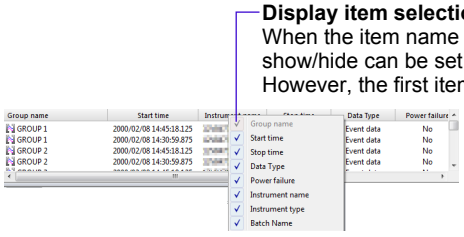

The waveform display is made by double-clicking the data or by right-clicking them and selecting the displayed menu
Setting search conditions
Clicking an item in a data list and sorting
Starting a search with search conditions
Saving search conditions
Changing the order by dragging and dropping an item
The properties of the selected data are displayed
The waveform of the selected data is displayed


The data for each item are sorted by clicking
Drawing pin
The window is minimized by clicking.
Click repeatedly to toggle between ascending and descending sort order.

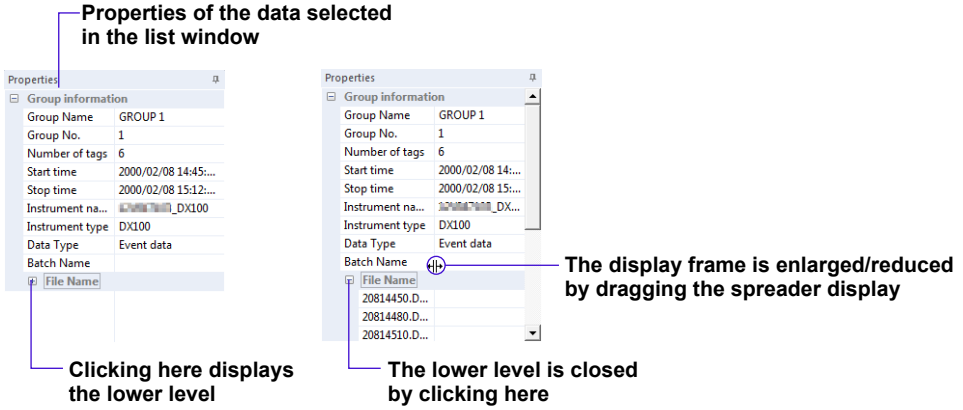





Height adjustment
When the mouse pointer becomes this mark, the size of the list window remains the same and the height of the upper and the lower region is adjusted.

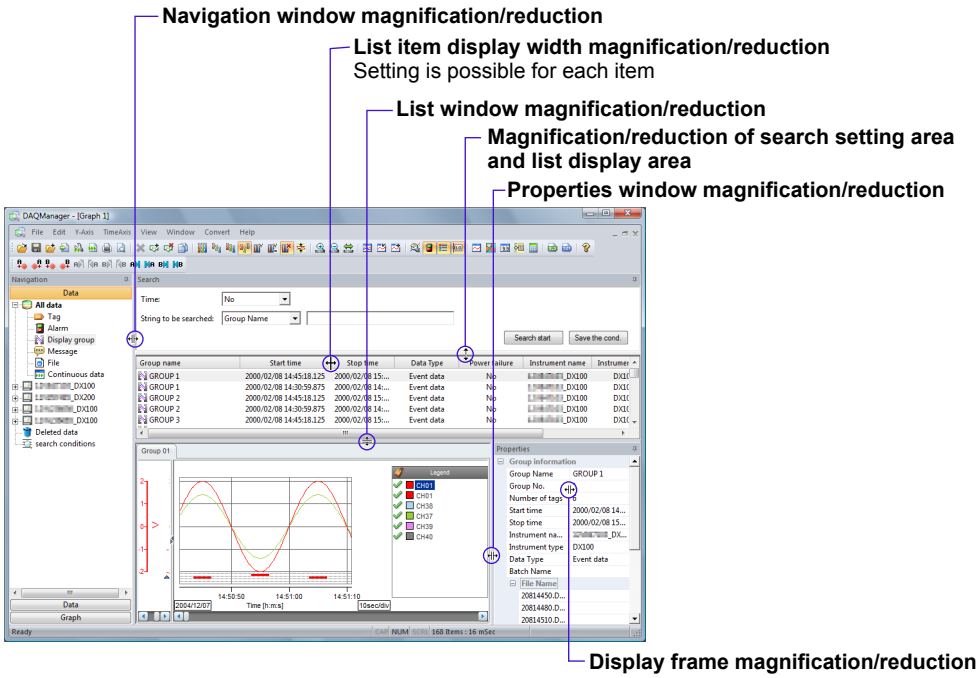

Display item selection
When the item name is right-clicked, a list is displayed and show/hide can be set. Display is made when this is checked. However, the first item cannot be selected as hidden.

Properties window display example


Properties of the data selected in the list window
The display frame is enlarged/reduced by dragging the spreader display
Clicking here displays the lower level
The lower level is closed by clicking here

Window spreader display example

A display example for the spreader displayed when the mouse cursor on the main screen is moved to a window boundary is shown below. An actual screen has only one spreader display.


Navigation window magnification/reduction
List item display width magnification/reduction
Setting is possible for each item
List window magnification/reduction
Magnification/reduction of search setting area and list display area
Properties window magnification/reduction
Display frame magnification/reduction

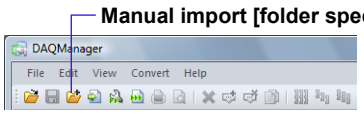
2.1 File Import and File Export

Manual file import

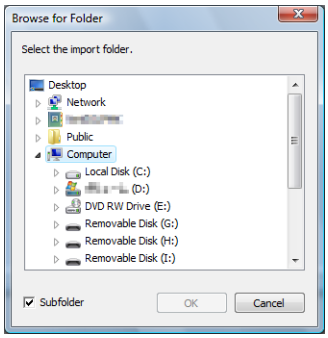
Procedure

Manual import [Folder specification]

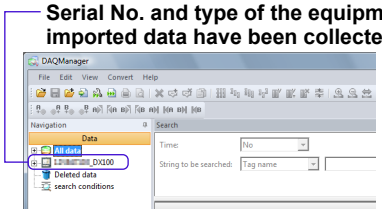
1. Click the **manual import [Folder specification]** icon or select **File > Manual import > Folder** from the menu bar.



The “Browse for Forlder” dialog box is displayed.

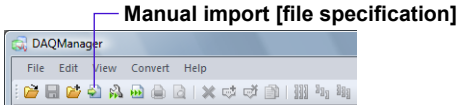


2. Specify a folder.
3. Click the **[OK]** button.
   Recorder display data or event data in the folder are copied to the management area.

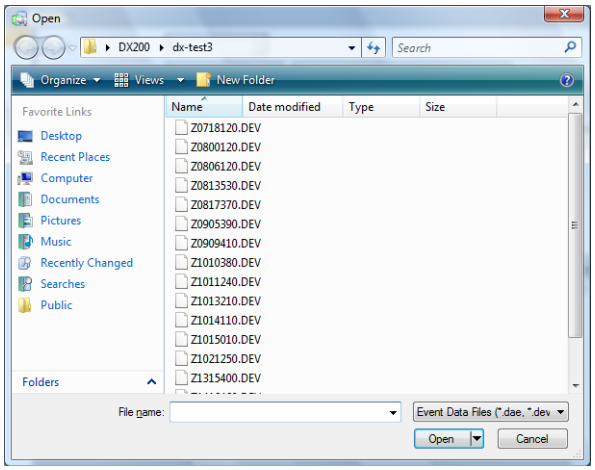


Manual import [File specification]

1. Click the **manual import [File specification]** icon or select **File > Manual import > File** from the menu bar.



The “Open” dialog box is displayed.



2. Select a file and click the **[Open]** button.
   The file is copied to the management area.

Explanation

Manual import of a folder

Manual import [Folder specification] is performed to acquire files in a folder to the management area without registration of that folder as a watch folder.
The following folders can be specified.

- Folder (including subfolders)
- Folders on a removable disk

The object files in the specified folder are copied to the management area.

Manual import of files

Manual import [File specification] is performed when files are to be acquired directly to the management area. Files on a removable disk can also be specified. As long as the specified files are object files of this software, they are copied to the management area. Multiple files can be specified.

Reimport of deleted data

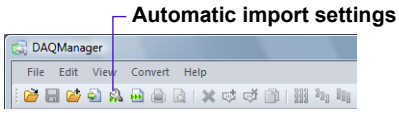
Deleted files can be reimported by manual import [Folder specification] or manual import [File specification].

Automatic file import

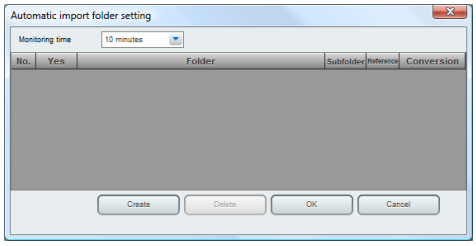
Procedure

Automatic import [Folder specification]

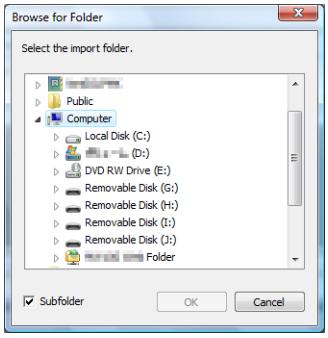
1. Click the **automatic import settings** icon or select **File > Automatic import > Folder specification** from the menu bar.



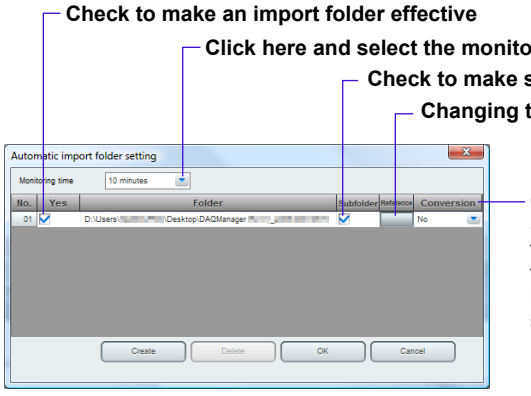
The “Automatic import folder setting” dialog box is displayed.



2. Click the **[Create]** button.
The “Browse for Folder” dialog box is displayed.



3. Select the folder and click the **[OK]** button.
The folder name is displayed in the “Automatic import folder setting” dialog box.
When the browse box is clicked, the “Browse” dialog box is displayed and folder change is possible.

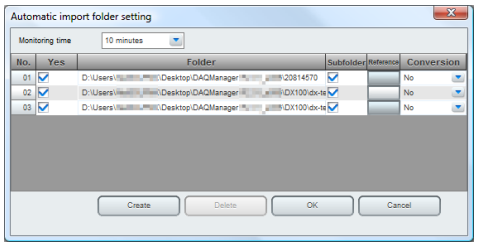


Conversion
Select a conversion format from the list. When importing files, Excel/Text conversion is performed by file (see section 4.9).

4. Click the input box for the monitoring time and select the time interval for checking imported files from the list box.

Deleting the import folder settings

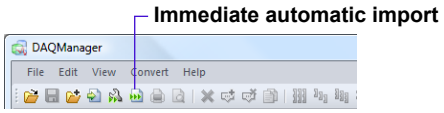
1. Click the “No.” column of the imported folder.
   The folder becomes selected.



2. Click the **[Delete]** button.
   The folder registration is deleted.

Immediate automatic import

1. Click the icon for **immediate automatic import** or select **File > Automatic import > Execute immediately** from the menu bar.



   Import is performed immediately from the folder specified as the import source.

Explanation

The following conditions exist for specification of the watch folder.
- Specification of the root directory where DAQManager is installed is not possible.
- The system directory of the OS cannot be specified.
- The management area of DAQManager cannot be specified.
- A hard disk connected via USB or a network folder assigned to a drive can be specified.
- Specification is possible for a maximum of 8 locations.

A watch folder must be set for automatic import.
Automatic import [Folder specification] monitors the data in the automatically set watch folder in intervals set by the monitoring time. When the monitoring time is set to “No”, automatic import is not performed.
When a corresponding file exists in the watch folder, the file is copied (imported) to the management area. When this occurs, if automatic data conversion was specified, the converted data is saved to the import folder at the time of import. (The data format can also be converted after waveform display.) See section 4.9, “Converting Data Formats.”
Even during import, waveform display and other processes can be performed.
When exiting the software, the import is aborted and exit is made.

After import, the navigation window information and the list information are updated to the most recent information.
The upper limit for devices from which import is possible is 300 units (including deleted data). Data which have been moved to “Deleted data” of the navigation window and have been deleted there cannot be imported automatically. See “2.2 Deleting Data Files or Devices” for “Deleted data.”

Immediate automatic import

Import from the folder set by automatic import [Folder specification] is performed immediately.

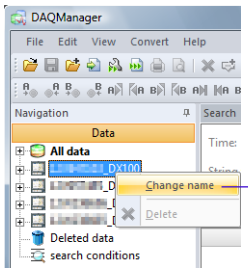
When immediate automatic import operation is performed, the set management folder is confirmed and any not yet imported files are imported. When this is during automatic import, the import is aborted and new import is performed.

The imported files are classified in the navigation window by devices, and they are displayed with the device serial No. and the device name.

Changing the imported equipment name

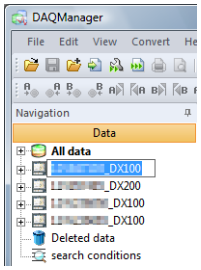
Procedure

1. Right-click the device name displayed in the navigation window and select “Rename.”



Right-click the device name and select “Change name”

Then the name can be changed.

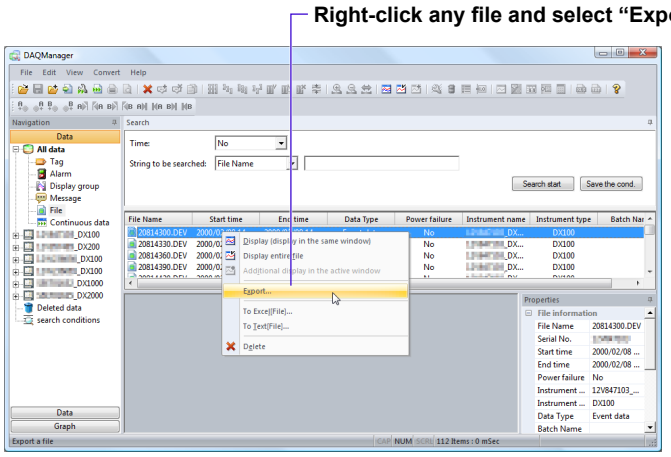


2. Change the name.

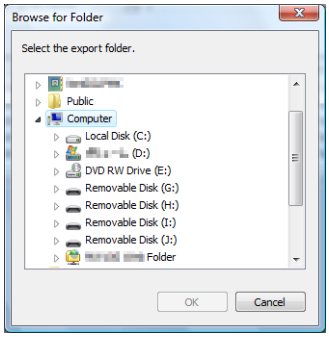
File export

Procedure

1. Click “File” in the navigation window and display the file list.



2. Right-click any file and select “Export” or click any file and then select **File > Export** from the menu bar.
   The “ Browse for Folder” dialog box is displayed.



3. Select a folder and click the **[OK]** button.
   The file is exported.

Explanation

Files imported to the management area are exported to the specified folder.
Exported files can be displayed with the viewer of our software DAQSTANDARD or DAQEXPLORER*.
Only files are export objects. Also, export is possible only when a file has been selected in the list window.
The name and the format of the exported file are the same as at the time of import.
The waveform color, marks, etc. set by DAQManager cannot be exported. Also, a folder specified as a watch folder cannot be specified as an export target.
If a file of the same name exists in the export destination folder, an overwrite message is displayed (see M10011 in section 5.1). Overwriting is done when the **[OK]** button is clicked.

* The DAQEXPLORER Viewer version 4.11 or before cannot display exported files of the DX1000/DX1000N/DX2000 release number 4.

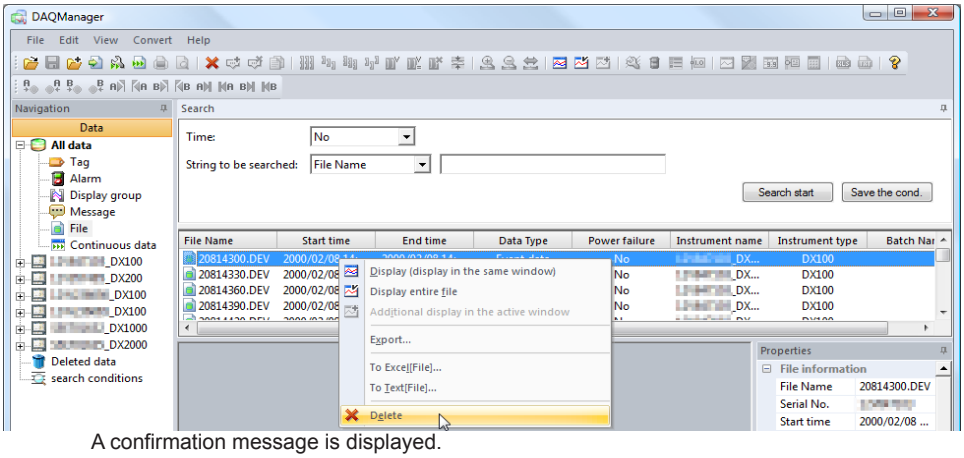
2.2 Deleting data files or devices

Deleting data files

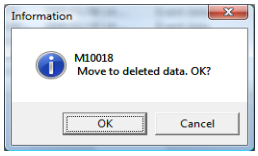
The data file in the file list is deleted. Files shown in waveform display or as waveform display conditions (“Graph,” see section 4.2) cannot be deleted.

Procedure

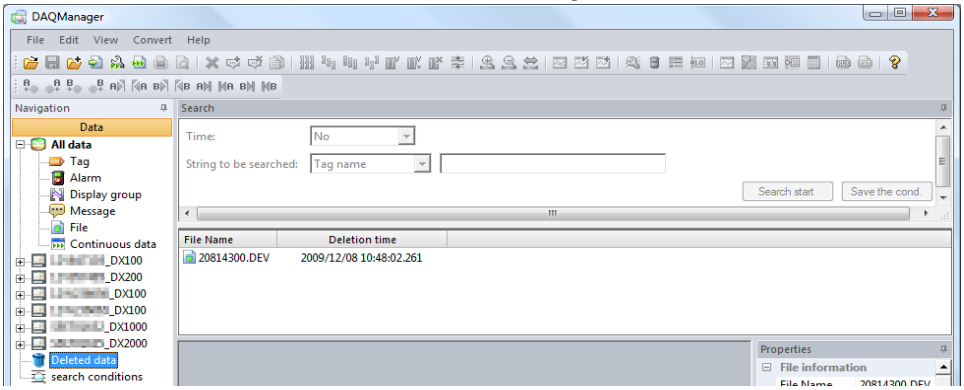
1. With the file list displayed, right click the data to be deleted and select “Delete” or click the data to be deleted and select **Edit > Delete** from the menu bar.



A confirmation message is displayed.



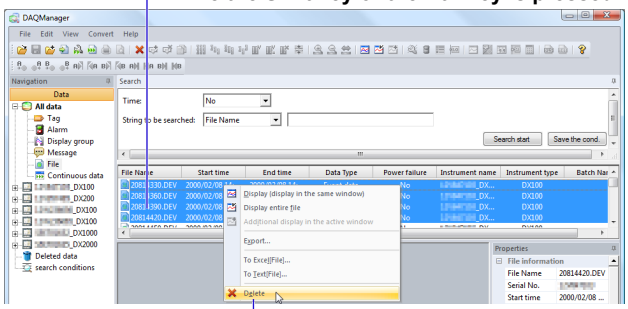
2. Click the **[OK]** button.
The data file is moved to “Deleted data” of the navigation window.



Note

When multiple files are selected while the Shift key or the Ctrl key is pressed, batch deletion of data files is possible.

Multiple files can be selected by selecting files while the Shift key or the Ctrl key is pressed



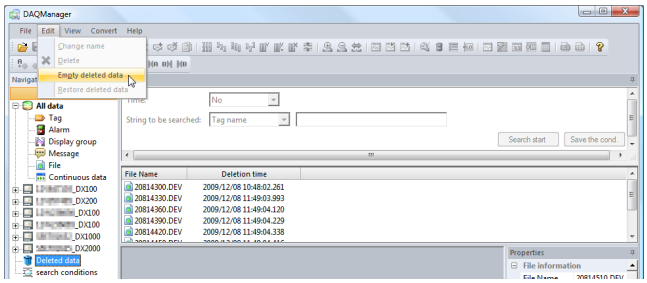
With all files of the data list selected, right-click and select Delete

Deleting a device

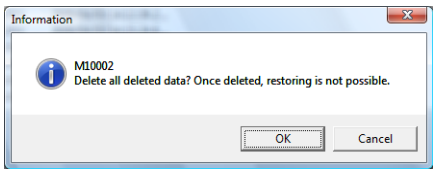
A device can be deleted only when all files of the device have been deleted.

Procedure

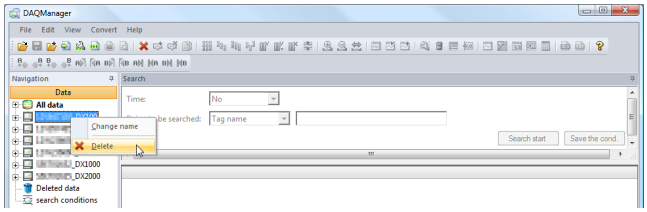
1. Display the file list of the device to be deleted and delete all data files. Execute “Data file deletion.”
   All data files are moved to “Deleted data” of the navigation window.
2. Click “Deleted data” of the navigation window and then select **Edit > Empty deleted data** from the menu bar.



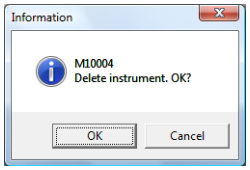
A confirmation message is displayed.



3. Click the **[OK]** button.
   “Deleted data” is emptied.
4. Right-click the device name to be deleted and select “Delete” or click the device name and select **Edit > Delete** from the menu bar.



A confirmation message is displayed.



5. Click the **[OK]** button.
   The device is deleted.

2.3 Editing the management area

Imported files are acquired to the management area. Up to 10 management areas can be created. With the initial setting, the initial name of management area is “Default.”
New creation, deletion, renaming, switching, backup copying, backup copy reading, consistency checking, data correction, and index size calculation can be performed for management areas.
When the management area is switched, the files imported to that management area can be searched and displayed.

With backup copying of the management area. the data files, the index file (file required for file searching), the graph information, and the display state settings in the management area which is the backup object are copied to the specified folder.
The size of the index file can be confirmed on the edit screen (index size) of the management area. When this index file becomes large, file import may become impossible. The size of the index file becomes smaller when data files in the management area are deleted. See “2.2 Deleting Data Files and Devices” for the deletion methods.

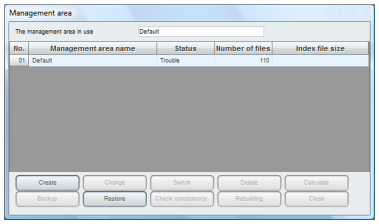
Calculation of the management area is displayed after the calculation of the capacity of all imported files.

A management area causing an error during a consistency check can be corrected by reconstruction.

Please close all waveform display screens when editing the management area. Also, all automatic imports are cancelled while editing the management area.

Note

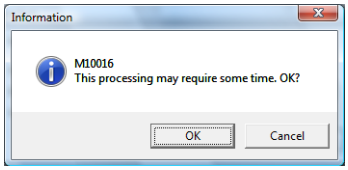
If the management area being used becomes corrupt for some reason, the Management area screen is displayed when DAQManager starts, and [Trouble] appears in the status box.



In such a case, reconstruct the management area or switch the management area.
For reconstruction of the management area, refer to “Reconstructing the management area” in this section. For switching of the management area, refer to “Management area switching” in this section.

Canceling editing processing

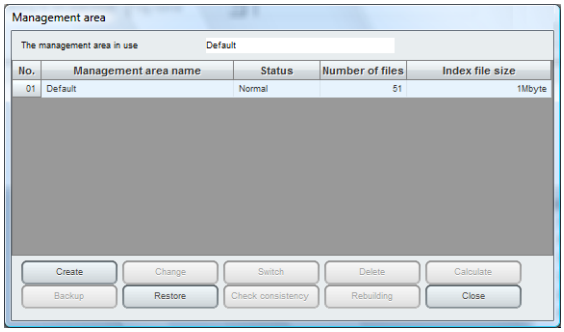
The management area editing operations for backup, restore, reconstruction, and consistency check may require some time, and cancellation during processing is possible. A message is displayed, and cancellation is possible by clicking the **[Cancel]** button.



Creating a new management area

Procedure

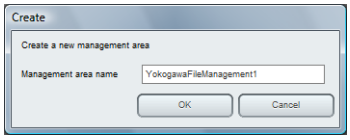
1. Select **File > Management area information** from the menu bar.
   The “Management area” screen is displayed.



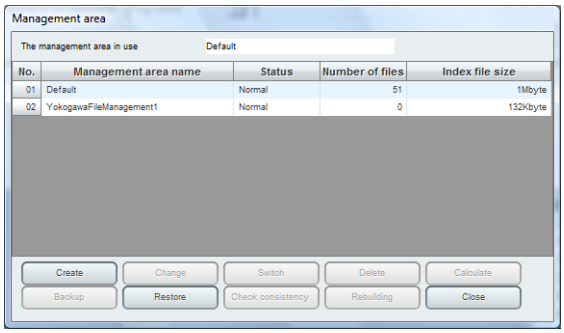
Note

Please close all waveform display screens when editing the management area.

2. Click the **[Create]** button.
   The “Create” dialog box is displayed.



3. Enter the name of the management area and click the **[OK]** button.
   The name of the management area is displayed in the list.



Explanation

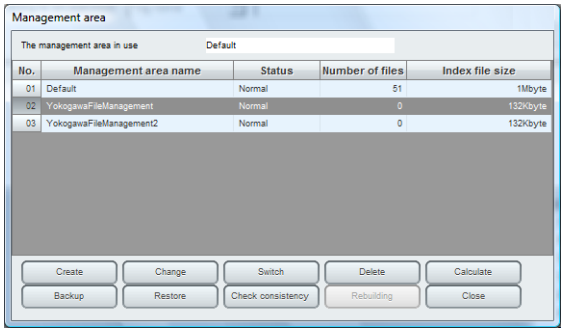
Creation of a new management area

New file information is created. The initial setting at the time of installation is “Default.”
Up to 10 file management areas can be created.
Duplicate file management area names cannot be used.

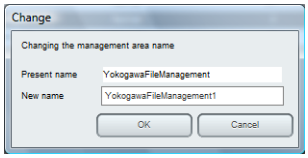
Changing the name of a management area

Procedure

1. Select **File > Management area information** from the menu bar.
   The “Management area” screen is displayed.



2. Click the No. of the management area name to be changed.
3. Click the **[Change]** button.
   The “Change” dialog box is displayed.



4. Enter the new name and click the **[OK]** button.
   The name is changed.

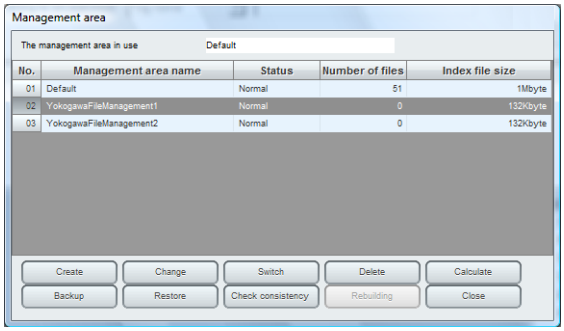
Explanation

The name of the management area is changed. Duplicating the name of another management area is not possible.

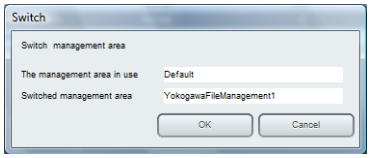
Management area switching

Procedure

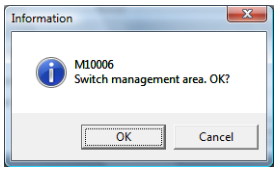
1. Select **File > Management area information** from the menu bar.
   The “Management area” screen is displayed.



2. Click the No. of the management area to be switched.
3. Click the **[Switch]** button.
   The “Switch” dialog box is displayed.



4. Specify the management area to be switched and click the **[OK]** button.
   A confirmation message is displayed.



5. Click the **[OK]** button.
   The management area is switched.

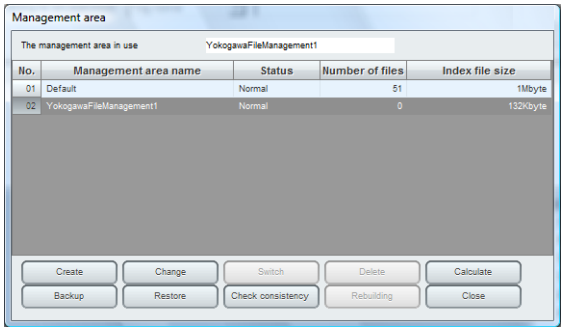
Explanation

The presently used management area is changed to a different management area.
Select a presently not used management area.

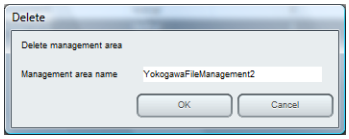
Deleting a management area

Procedure

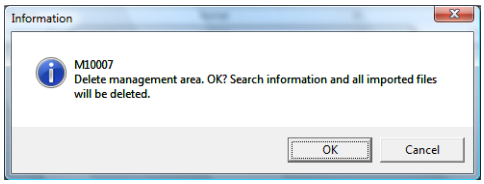
1. Select **File > Management area information** from the menu bar.
   The “Management area” screen is displayed.



2. Click the No. of the management area to be deleted.
3. Click the **[Delete]** button.
   The “Delete” dialog box is displayed.



4. Confirm the management area to be deleted and click the **[OK]** button.
   A confirmation message is displayed.



5. Click the **[OK]** button.
   The management area is deleted.

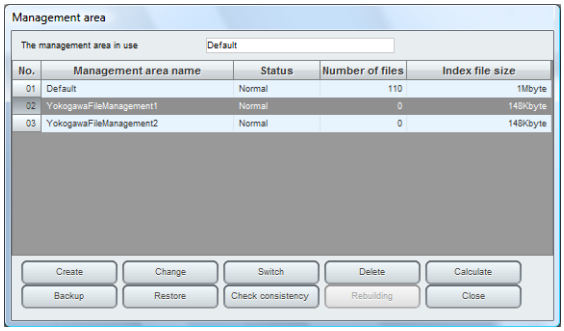
Explanation

A management area is deleted. The management area presently being used cannot be deleted.

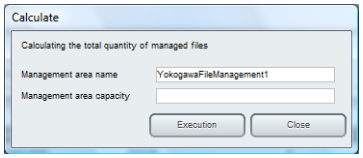
Confirming the size of the management area

Procedure

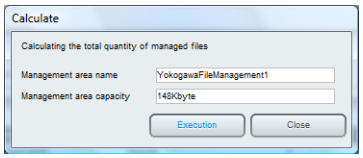
1. Select **File > Management area information** from the menu bar.
   The “Management area” screen is displayed.



2. Click the No. of the management area for which the size is to be confirmed.
3. Click the **[Calculate]** button.
   The “Calculate” dialog box is displayed.



4. Click the **[Execution]** button.
   The calculation result is displayed in the management area size column.



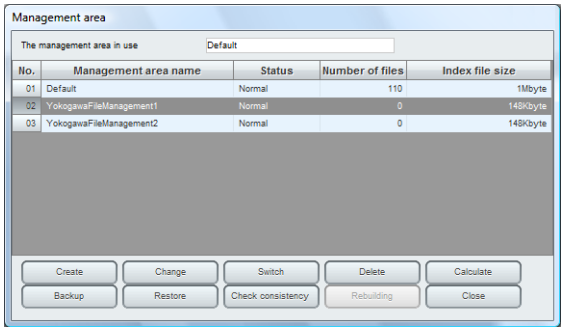
Explanation

The size of all files imported to the selected management area is calculated and the result is displayed.

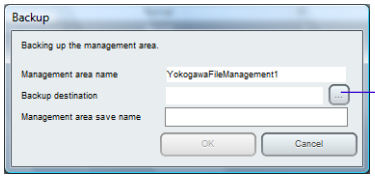
Making a backup copy of a management area

Procedure

1. Select **File > Management area information** from the menu bar.
   The “Management area” screen is displayed.

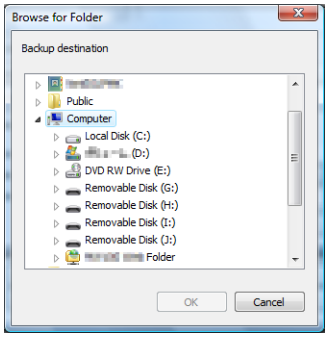


2. Click the No. of the management area for which data backup is to be performed.
3. Click the **[Backup]** button.
   The “Backup” dialog box is displayed.

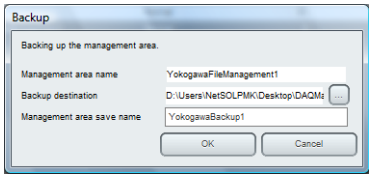


Click here

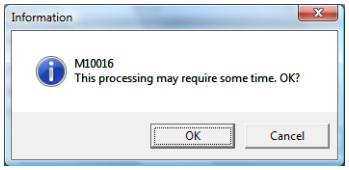
4. Click the button on the right side of the backup destination text input box.
   The “Browse for Folder” screen is displayed.



5. Select the folder and click the **[OK]** button.
6. Enter the save name for the management area and click the **[OK]** button.



A message is displayed.



7. Click the **[OK]** button.
   The backup data are saved in the specified folder.

Note

When the free capacity of the specified folder is not sufficient, the message “Insufficient capacity for backup” is displayed. Secure the capacity or specify a different folder.

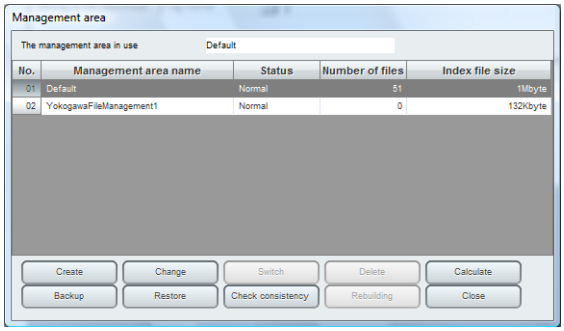
Explanation

The data of the selected management area are copied to the specified folder. The copied information consists of the imported data files, the index file, the graph information, and the display state settings.
At the time of backup, a folder with any name is created at any location and all data are saved in that folder.

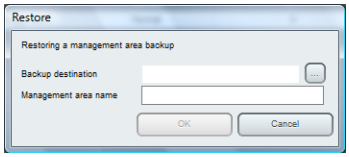
Reading backup data

Procedure

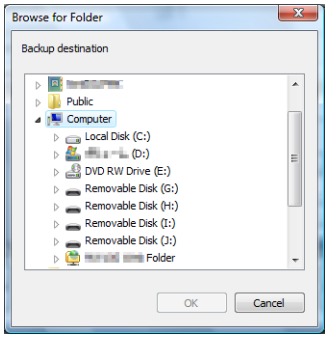
1. Select **File > Management area information** from the menu bar.
   The “Management area” screen is displayed.



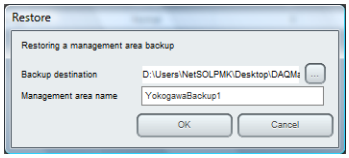
2. Click the **[Restore]** button.
   The “Restore” dialog box is displayed.



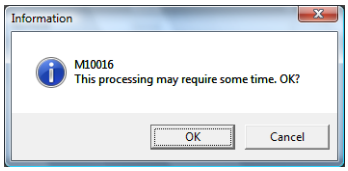
3. Click the button on the right side of the backup destination text input box.
   The “Browse for Folder” screen is displayed.



4. Select the backup data folder to be read in and click the **[OK]** button.
5. Enter the name of the management area to be read in and click the **[OK]** button.



A message is displayed.



6. Click the **[OK]** button.
The restored management area is added.
All read in backup data are copied to the management area.

Explanation

The backup data created by data backup are read in. The management area is given a name when the data are read in.
When backup data are read in all backup data are copied to the management folder. The restored management area is added to the “Management area” dialog box.

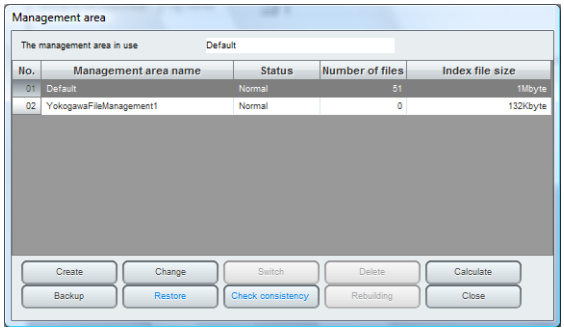
Note

When a backed-up management area is restored to a personal computer with a different time zone, the waveforms are not restored correctly. In this case, normal operation is obtained by reconstruction.
However, even in case of reconstruction when the time zone has been changed, graphs cannot be used normally.

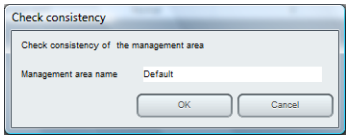
Data consistency check

Procedure

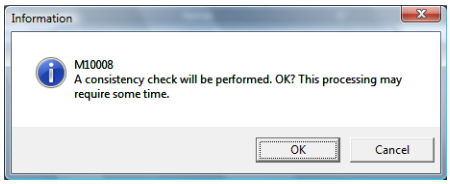
1. Select **File > Management area information** from the menu bar.
   The “Management area” screen is displayed.



2. Click the No. of the management area to be checked.
3. Click the **[Check consistency]** button.
   The “Check consistency” dialog box is displayed.



4. Click the **[OK]** button.
   A message is displayed.



5. Click the **[OK]** button.
   A consistency check is performed.

Note

No operations are possible during a consistency check. A consistency check can be cancelled.

Explanation

The consistency of the selected management area is checked.
The consistency of data is checked when data have been opened in the management area, files have been changed, and the consistency between data has been lost.
When the consistency of the selected file management area cannot be obtained, an error message is displayed. For correction, reconstruct the management area. (See next page.)
No functions can be used while checking. Cancellation is possible with the **[Cancel]** button. In case of cancellation, the data are returned to the condition before the consistency check.

Reconstructing the management area

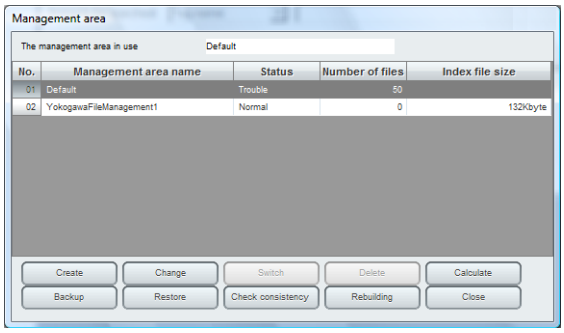
When an error is caused with a consistency check of the management area, reconstruction is performed.

Note

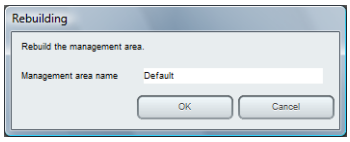
Do not change the time zone for a personal computer using DAQManager. The operation is not normal when the time zone is changed. If change is required, reconstruct the management area.
Waveforms are also not displayed normally when a backup of the management area is restored to a personal computer with a different time zone. In this case also, normal operation is obtained by reconstruction.
However, even in case of reconstruction when the time zone has been changed, graphs cannot be used normally.

Procedure

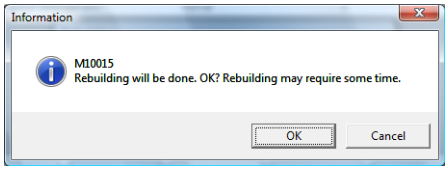
1. Select **File > Management area information** from the menu bar.
   The “Management area” screen is displayed.



2. Click the No. of the management area name to be reconstructed.
3. Click the **[Rebuilding]** button.
   The “Rebuilding” dialog box is displayed.



4. Click the **[OK]** button.
   A message is displayed.



5. Click the **[OK]** button.
   The management area is reconstructed.

Explanation

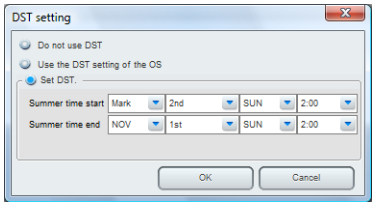
When reconstruction is performed, a broken management area is repaired.
When a device name has been changed in the navigation window and reconstruction is performed, the changed device name may return to the device serial No. and the type name.

2.4 Setting summer time

When searching for data with summer time setting of the DXAdvanced unit, the MVAdvanced unit, and the FX100 unit search can be performed with application of summer time to the time of the imported files.

Procedure

1. Select **File > DST setting** from the menu bar.
   The “DST setting” dialog box is displayed.



2. Check one of the check boxes “Do not use DST”, “Use the DST setting of the OS”, and “Set DST.”
3. When “Do not use DST” or “Use the DST setting of the OS” is checked, go to step 5.
   When “Set DST” is checked, the setting screen becomes active. Go to step 4.
4. Select the start time and the end time for summer time from the list box after clicking the respective text box.
5. Click the **[OK]** button.

Explanation

The DST setting is applied to all imported files and all years.
The setting range is shown below.

Setting item		Contents
Summer time start	Month	January to December
	Week	1st to 4th, last
	Weekday	Sunday to Saturday
	Hour	0 to 23
Summer time end	Month	January to December
	Week	1st to 4th, last
	Weekday	Sunday to Saturday
	Hour	0 to 23

When files recorded with DXAdvanced, MVAdvanced, or FX100 set to summer time are imported, the time becomes standard time. When DAQManager is set to summer time, the summer time setting of DXAdvanced, MVAdvanced, or FX100 should be matched.

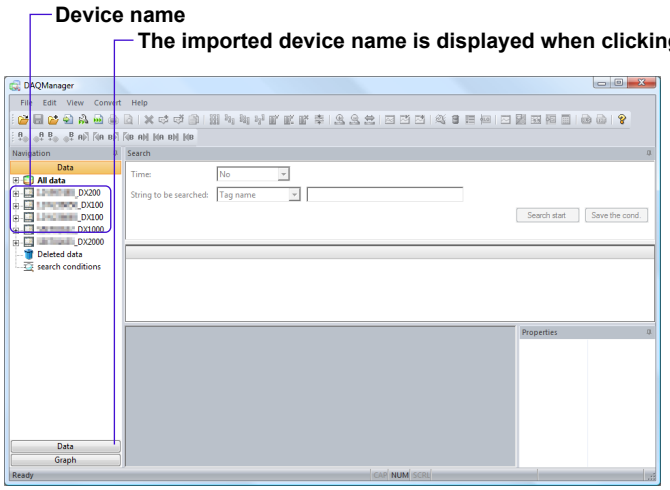
3.1 Data List Display

When data are searched, a list of the object data is displayed in the search folder. The imported files are taken under management and they are classified automatically by devices. The classified files are displayed as lists when an item is selected in the navigation window or as graph lists when graph is selected.

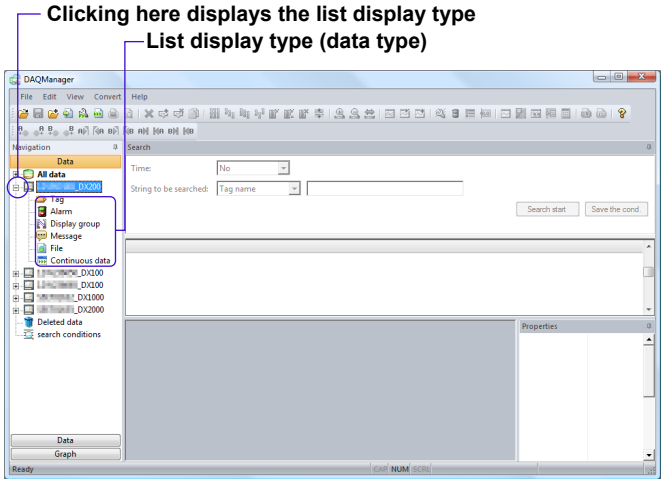
List display

Procedure

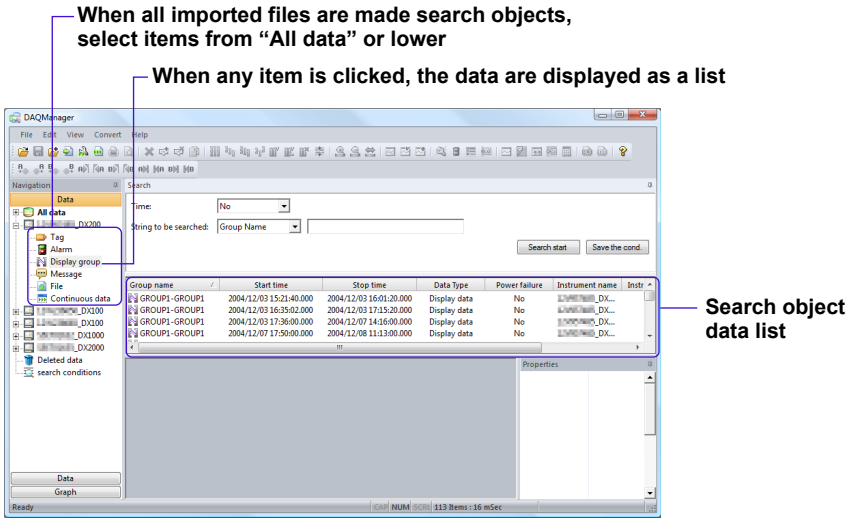
1. Select “Data” in the navigation window or select **View > Data** from the menu bar.
The device name is displayed in the navigation window.



2. Click the “+” mark on the left side of the device name.
The list display type is displayed.



3. Select the list display type.
The data list is displayed.

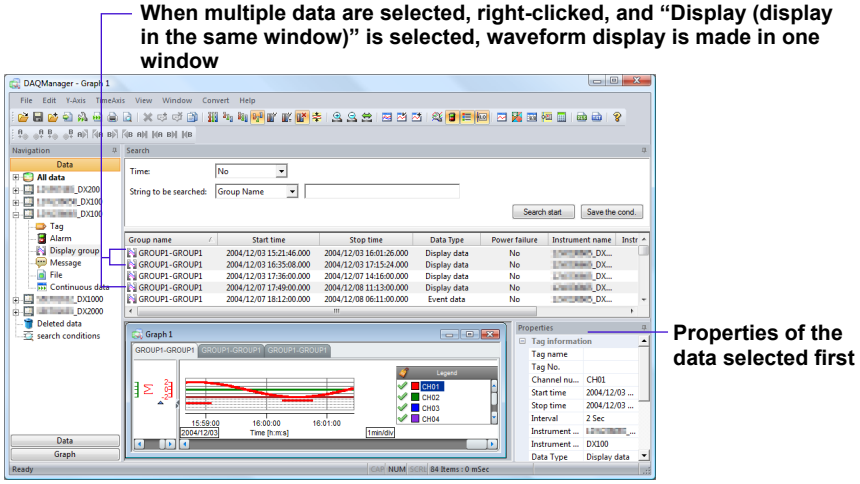

When all imported files are made search objects, select items from “All data” or lower
When any item is clicked, the data are displayed as a list
Search object data list

Select data and display a waveform

For details, see “4.1 New Creation of Data and Additional Display.”

4. Select any data. Click one set of data to select it, click with the Shift key held down to select a range of data, or click multiple data while holding the Ctrl key down.

5. Right click and select “Display (display in the same window)”, “Display entire file”, or “Additional display in the active window.” You can also select any data and then select **View > “Display (display in the same window)”**, **“Display entire file”**, or **“Additional display in the active window”** from the menu bar.
When “Display (display in the same window)” is selected, all selected data are displayed as waveforms in one window.
When “Display entire file” is selected, the files including the selected data are displayed as waveforms in one window.
When “Additional display in the active window” is selected, the data are displayed additionally in the active waveform display window.


When multiple data are selected, right-clicked, and “Display (display in the same window)” is selected, waveform display is made in one window
Properties of the data selected first

Explanation

The categories of data in the navigation window are as follows. You can sort by category by clicking the display contents item name. The order of items can be changed by dragging. View/hide of items also can be set. See “1.5 Names of Parts on the Main Screen and their Use.”

Data types	Display contents
Tag	Tag name, tag No., channel name, start time, stop time, cycle, data type, power failure, device name, device type, batch name
Alarm	Alarm status, alarm type, alarm level, occurrence time, tag name, channel name, data type, device name, device type, batch name
Group No.	Display group name, start time, stop time, data type, power failure, device name, device type, batch name
Message	Message, input user name, time, input display group, data type, device name, device type, batch name
File	File name, star time, end time, data type, power failure, device name, device type, batch name
Continuous data	Start time, stop time, data type, power failure, device name, device type, batch name, batch group No.

List display restrictions

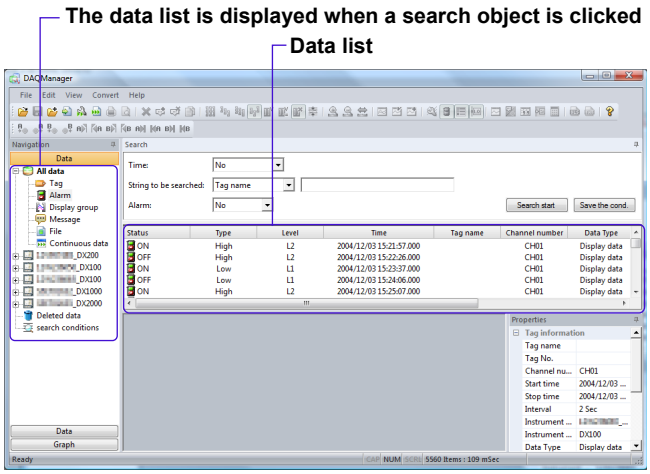
List display is possible for 100,000 cases.

3.2 Setting, Saving and Deleting Search Conditions

Search conditions for data or waveform display conditions (flag) can be set, saved, and deleted.

Procedure

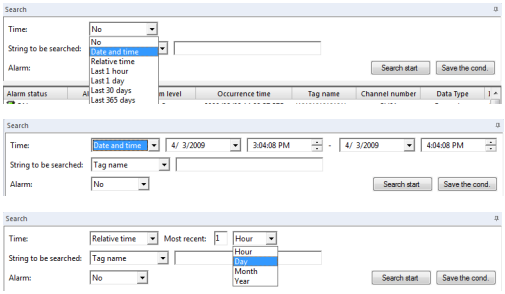
1. Import files.
   For the operation procedures, see “2.1 File Import and File Export.”
2. Select the type of list display to be searched from the navigation window.
   The data are displayed in the data list area.



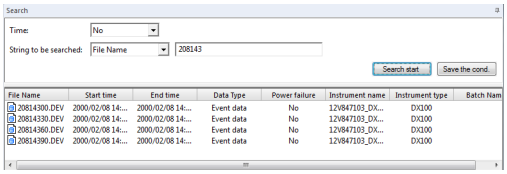
Restricting the search conditions

3. Search conditions are set in the search condition setting area.
   The setting contents differ according to the search object data.

Setting example for time search



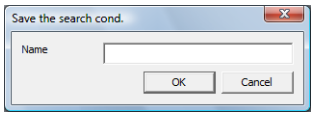
Setting example for a search text string



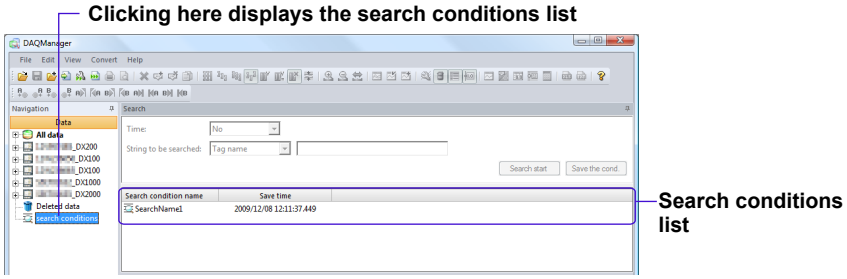
4. Click the **[Search start]** button.
   The search result is displayed in the data list area.

Saving search conditions

1. Click the **[Save the cond.]** button after setting the search conditions.
   The “Save the search cond.” dialog box is displayed.



2. Enter the name of the search conditions and click the **[OK]** button.
   When “Search conditions” of the navigation window is clicked, list display is made.



Renaming the search conditions

1. Right-click the search conditions.

2. Select **[Change name]**.
   The search conditions name is highlighted.
3. Change the name.

Deleting search conditions

1. Right-click the search conditions.
2. Select **[Delete]**.
   A confirmation dialog box is displayed.

3. Click the **[OK]** button.
   The search conditions are deleted.

Explanation

Setting search conditions

The search conditions differ according to the data specified in the navigation window.

Search type		Search method	Search object
Time	None	Time search is not performed.	Tag list Alarm list Display group list Message list File list Continuous data list
	Date and time	Search is done for the specified date period.	
	Relative time	Data within the last xx hour, the last xx day, the last xx month, or the last xx year relative to the present time are searched. xx : 1 to 99	
	Last 1 hour	Based on the current time, the data of the last hour of the search object data are searched.	
	Last 1 day	Based on the current time, the data of the last day of the search object data are searched.	
	Last 30 days	Based on the current time, the data of the last month of the search object data are searched.	
	Last 365 days	Based on the current time, the data of the last year of the search object data are searched.	
String to be searched	Tag name	Enter a text string. Intermediate match search is performed for the text string.	Tag list Alarm list
	Tag No.*		
	Channel number		
	Batch name		Tag list Alarm list Display group list Message list File list Continuous data
	Group name		Display group list
	Message		Message list
	Input user name		
	File name		File list
	Batch text		Continuous data
	Batch comment		Continuous data
Alarm	High	Select the alarm type	Alarm list
	Low		
	Delay High		
	Delay Low		
	Rate High		
	Rate Low		
	Delta High		
	Delta Low		

* The tag No. is displayed only at the time of tag list display.

Saving search conditions

The set search conditions can be saved. The search conditions list is displayed when “Search conditions” of the navigation window is selected.

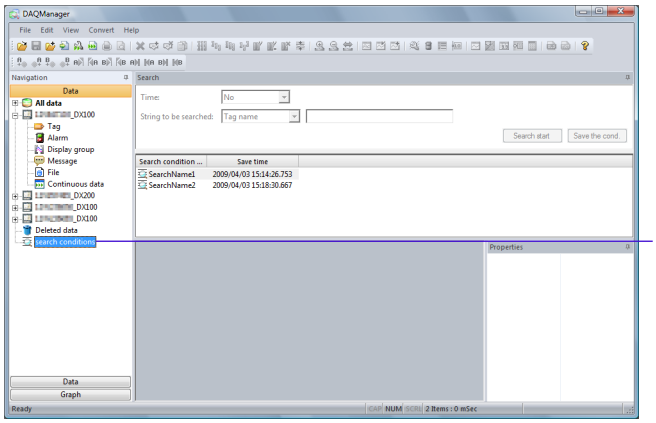
Deleting search conditions

When the search conditions are deleted, they cannot be restored. Deletion is made without relocation to Deleted data.

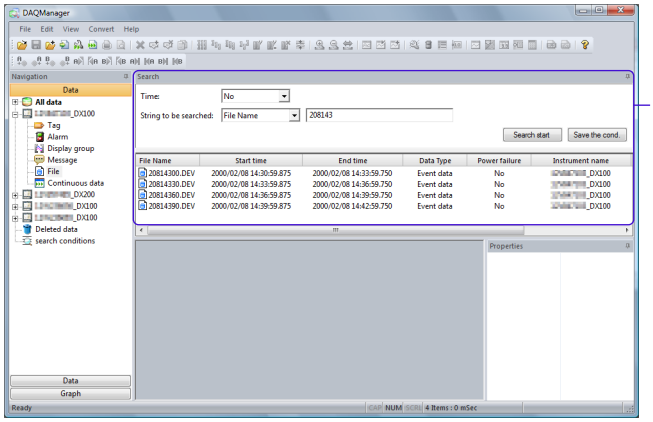
3.3 Reading Search Conditions

Procedure

1. Click “search conditions” of the navigation window.
The list of search conditions is displayed.



2. Double-click any search conditions.
Search is performed according to the saved search conditions and the search result is displayed.



Explanation

When the search conditions are read in, display is made in the state at the time the search conditions were saved.
The search results are displayed in the most recent state. For example, if automatic file import has been set, the data are displayed updated to the most recent state.

4.1 New Display of Data and Additional Display

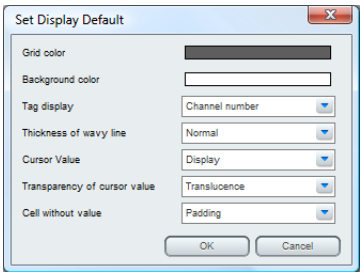
Setting the waveform display method

Before displaying data as a waveform, set the waveform display method. After setting the display method and displaying waveforms, the waveforms appear in the specified display format. After displaying waveforms, you can also change and save the display method. Even if the waveform display method is set, when displaying a graph (see section 4.2) the display method saved with the graph takes precedence.

Procedure

Setting the waveform display

1. On the menu bar, click **Display** > **Set default**.
   The [Set Display Default] dialog box is displayed.



2. Set each item.

Explanation

Waveforms are displayed according to the specified conditions. The contents of the setting items are as follows.

Setting item	Description
Grid color	Waveform grid color
Background color	Waveform background color
Tag display	Channel name/Tag name/Tag No.
Thickness of wavy line	Normal/Middle/Thick
Cursor value	Display/No Display
Transparency of cursor value	Translucence/Opacity
Cell without value	Padding/Not padding Sets whether to fill cells without values or to leave them blank. Cells without values are filled in with previous values (event data) or subsequent values (display data).

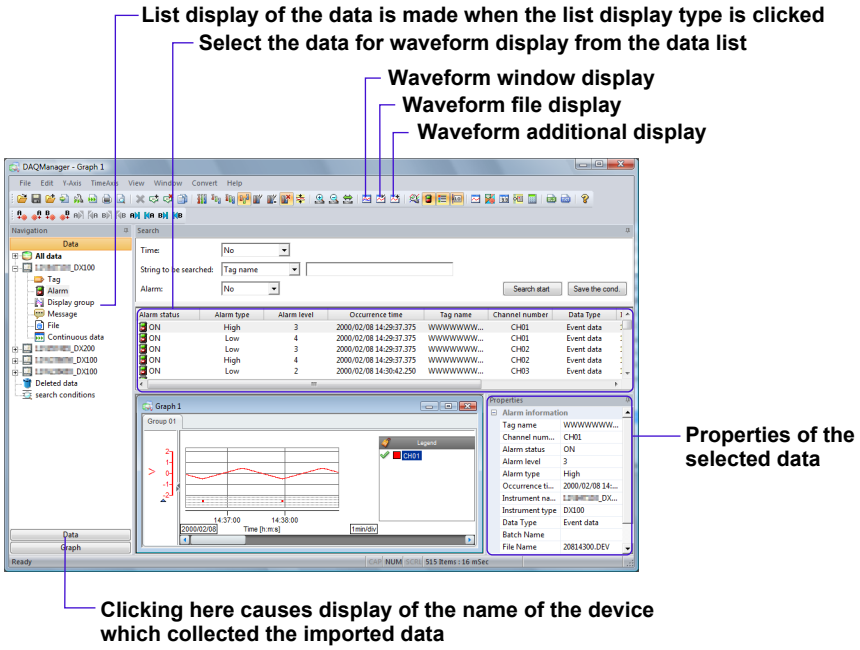
After waveform display you can change the default settings, but the waveform display prior to the change will remain.

Waveform display from a data list

Procedure

New display of data

1. Click any list display type of “Data” of the navigation window.
   List display is performed for the data.
2. Click any data in the data list.


List display of the data is made when the list display type is clicked
Select the data for waveform display from the data list
Waveform window display
Waveform file display
Waveform additional display
Properties of the selected data
Clicking here causes display of the name of the device which collected the imported data

3. Select **View > Display (display in the same window)** from the menu bar, click the **“Waveform window display”** icon, or right-click and select **[Display (display in the same window)]**.
   A new waveform window opens and the data are displayed as waveform.

Note

Waveform display can be done simply by double-clicking the data for which waveform display is to be performed instead of steps 2 and 3.

Additional display of data

4. Click the data to be added from the data list.
5. Select **View > Additional display in the active window** from the menu bar, click the **“Additional waveform display”** icon, or right-click the data and select **[Additional display in the active window]**.
   Data are displayed additionally in an existing active waveform window.

Display waveform in entire file

1. Perform steps 1 and 2 of “New display of data.”
2. Select **View > Display entire file** from the menu bar and click the **“Waveform file display”** icon, or right click and select **[Display entire file]**.
   The data are displayed in file units.

Explanation

New waveform display

A new waveform window is displayed. Even if the same data already are displayed as waveform, waveform display is made in a new window.

Additional waveform display

Additional display is made in a displayed waveform window.
When the limit for the number of displayed tags is exceeded by additional display, the message “The upper limit for the groups for which waveform display is possible has been exceeded. A part will not be displayed additionally.” is displayed. Display in a separate waveform window or delete not required group tags.
Delete not required group tags in the “Detail settings” dialog box. (See “4.4 Waveform Detail Settings.”)

Display entire file

Waveform display is made not only for the selected data, but also for the entire file including these data. At this time, the time axis becomes the start/stop time instead of file units.

Status list at the time of waveform display of data

The state when data have been selected from tags, alarms, display groups, messages, files, and continuous data lists and waveform display has been made becomes as shown below.

State with waveform display of tag data

View menu items	State with waveform display
Display	One waveform window is displayed, and the selected tags are displayed in the same waveform window.
Display entire file	The files including the selected tags are displayed. Waveform windows are displayed for the number of files including tags. Tags in the same file are displayed in the same waveform window.
Additional display in the active window	Tags are displayed additionally in a display group. When the max. number of tags which can be displayed is exceeded, a message indicating that some tags cannot be added is displayed.

State with waveform display of alarm data

View menu items	State with waveform display
Display	One waveform window is displayed, and the selected alarms are displayed in the same waveform window.
Display entire file	The files including the selected alarms are displayed. Waveform windows are displayed for the number of files including tags. Tags in the same file are displayed in the same window.
Additional display in the active window	Tags for an alarm which has occurred in a display group are displayed additionally. Alarms which have occurred for the same tag are put together. When the max. number of tags which can be displayed is exceeded, a message that some tags cannot be added is displayed.

State with waveform display of display group data

View menu items	State with waveform display
Display	One waveform window is displayed, and the selected groups are displayed by groups.
Display entire file	The files including the selected groups are displayed. Waveform windows are displayed for the number of files including groups. Groups in the same file are displayed in the same window.
Additional display in the active window	All tags in the groups added to the display groups are added. Because tags are added, messages added to the relevant groups are set to No Display by default. The group name is destroyed. When the max. number of tags which can be displayed is exceeded, a message that some tags cannot be added is displayed.

State with waveform display of message data

View menu items	State with waveform display
Display	One waveform window is displayed, and the groups with the selected messages are displayed by groups.
Display entire file	Files including groups with the selected messages are displayed. Waveform windows are displayed for the number of files including groups with messages. Messages in the same file are displayed in the same window.
Additional display in the active window	Groups with messages are added. When the max. number of groups is exceeded, a message that some groups cannot be added is displayed.

State with waveform display of file data

View menu items	State with waveform display
Display	One waveform window is displayed and the files are displayed by groups according to the file groups.
Display entire file	Waveform windows are displayed for the number of selected files. However, display is made in the same window when the Start/Stop time (continuous file) is the same.
Additional display in the active window	All groups in the file are displayed additionally as groups. When the max. number of groups is exceeded, a message that some groups cannot be added is displayed.
Waveform display	Display of the most recent data waveforms
Export	Copying in the format created by the device is performed from under management to the specified folder.
To Excel[File]	Files selected in the list are converted to Excel.
To Text[File]	Files selected in the list are converted to text.
Delete	Moves files to Deleted data. Files whose waveform data is being displayed cannot be deleted. You can delete an instrument only if all the files of the instrument have been deleted.

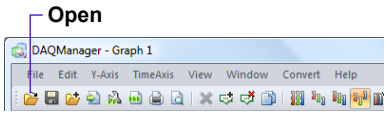
State with waveform display of continuous data

View menu items	State with waveform display
Display	One waveform window is displayed, and the groups of the selected batch are displayed by groups.
Display entire file	Waveform windows are displayed for the number of selected batches.
Additional display in the active window	All groups in the batch are displayed additionally as groups. When the max. number of groups is exceeded, a message that some groups cannot be added is displayed.

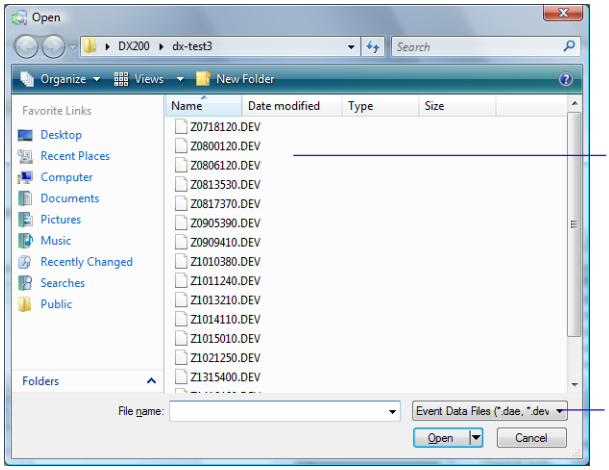
Waveform display from files

Procedure

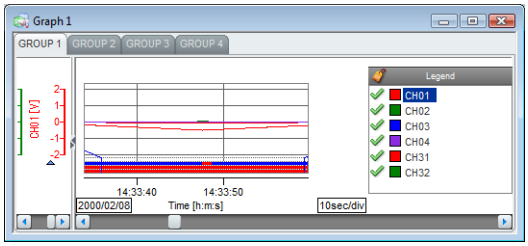
1. Select **File > Open** from the menu bar or click the **"Open"** icon.



The "Open" dialog box is displayed.



2. Click the **[Open]** button after specifying the file type and the file name.
The selected data are displayed as waveform.



Note

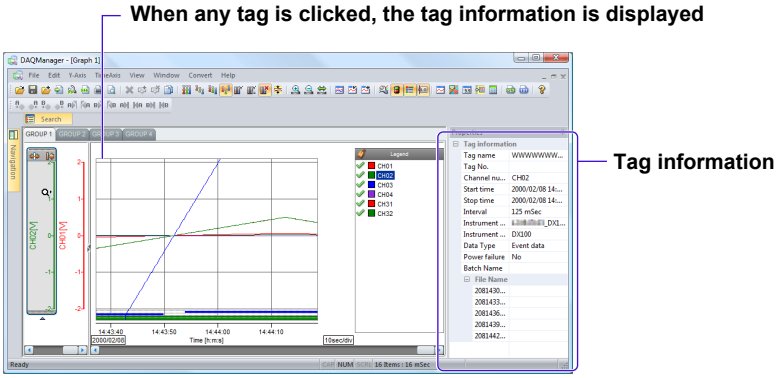
When a file is opened and displayed as a waveform, the file is imported automatically. Data deleted by moving them to "Deleted data" of the navigation window also will be reimported when they are displayed as waveform.

Display of tag information

Active tag information is displayed.

Procedure

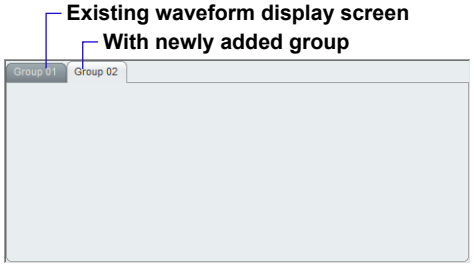
When a Y-axis tag is clicked on the waveform display screen, the tag information is displayed in the properties window. For information on waveform display, see section 4.1.



Adding groups

Procedure

1. While in waveform display, click **Edit > Append Group** on the menu bar.
   A tab with a new group name is created in the active waveform display screen.



2. Right-click any data in the data list, then click **Additional display** in the active window.
   The data is displayed as waveforms in the tab of the new group name.

Note

If you add a new group and then click another group tab without displaying any new waveforms in the added group, the added group tab disappears. You can add the group again to display it.

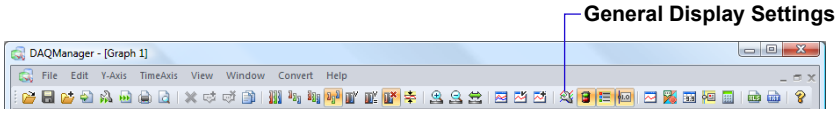
Explanation

Groups can be added when the waveform display screen is shown. The names of added groups are assigned based on existing group names and the order in which they are added, as in: Group1, Group2, Group3, …etc.

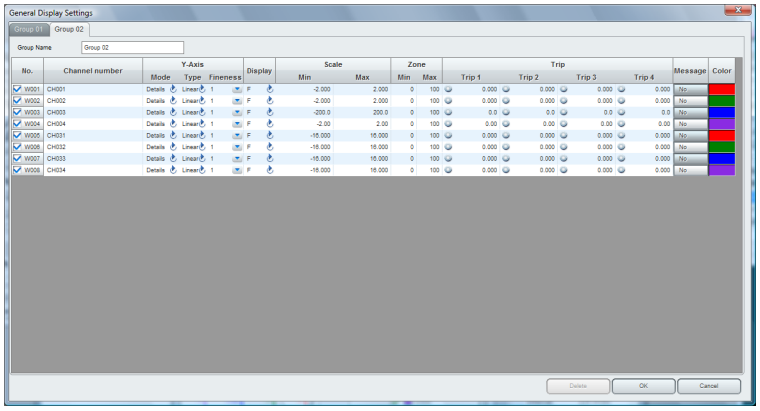
Deleting groups

Procedure

1. On the menu bar, click **View > General Display Settings**, or click the **General Display Settings** icon.

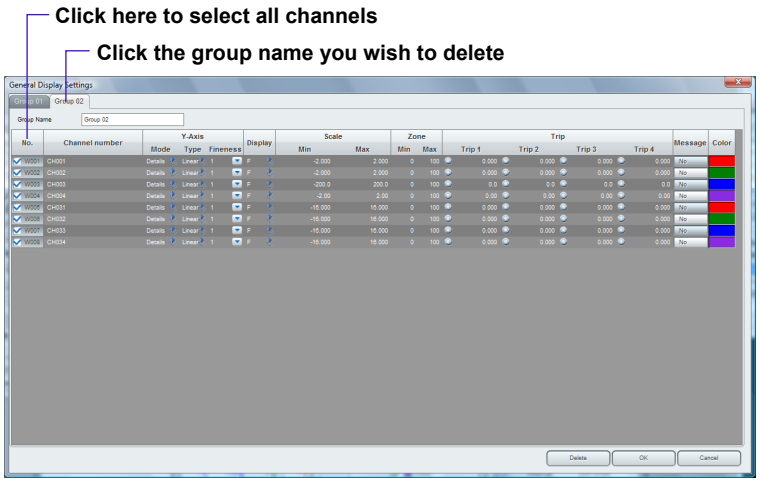


The General Display Settings dialog box appears.

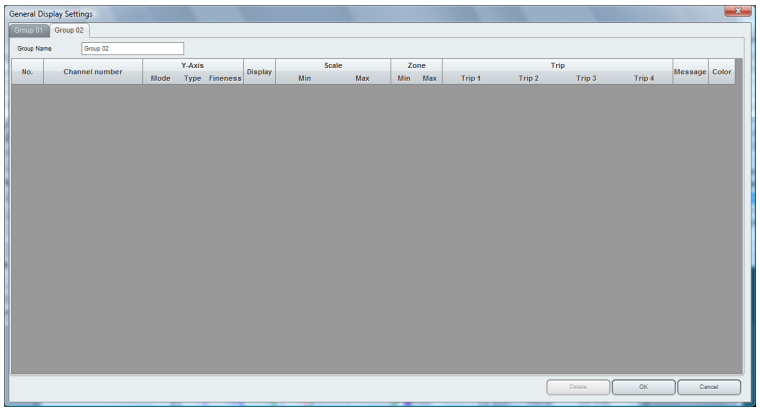


2. Click the group tab that you wish to delete.

3. Click the **No.** column header.
All channels are selected.



4. Click the **Delete** button.
All channels are deleted.



5. Click the **OK** button. The group tab is deleted.

Note

If you delete a group, the next group that is added is shown without a group name.

Explanation

Groups are deleted by deleting all the channels within the group.

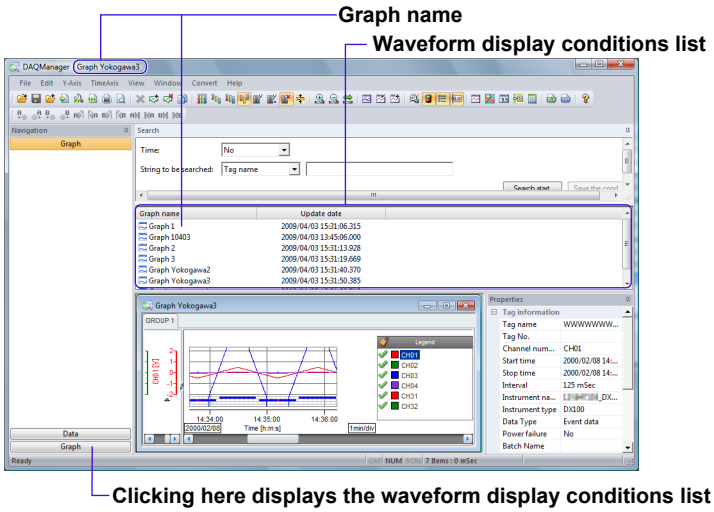
4.2 Saving and Renewal of the Waveform Display Conditions (graph)

Save the waveform display conditions. The DAQManager file menu calls the waveform display conditions “Graph.”

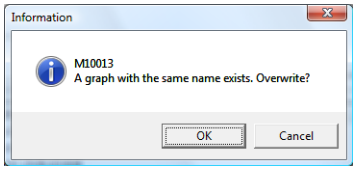
Procedure

Saving the display conditions

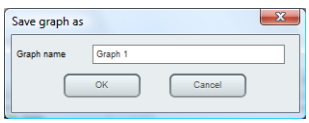
1. With waveform display, click “Graph” of the navigation window.
The waveform display conditions list is displayed. When no waveform display conditions have been saved, nothing is displayed in the list.



2. Select **File > Save graph** or **Save graph as …** from the menu bar.
When **Save graph** is selected, saving is done with the graph screen name. When a file with the same name exists, a message is displayed.



When **Save graph as…** is selected, the “Save graph as…” dialog box is displayed.



When graph saving has been selected

3. For overwriting with the “Information” dialog box, click **[OK]**, and for not overwriting, click **[Cancel]**.

When Save graph as… has been selected

3. Change the graph name in the “Save graph as…” dialog box and click the **[OK]** button.
The display condition file name is displayed in the graph list as list display.

Redraw with the saved display conditions

Double-click any display conditions name from the waveform display conditions list.
Redraw the graph is performed with the saved display conditions.
When files which can be connected have been newly imported, always perform display after graph connection.

Copy to clipboard

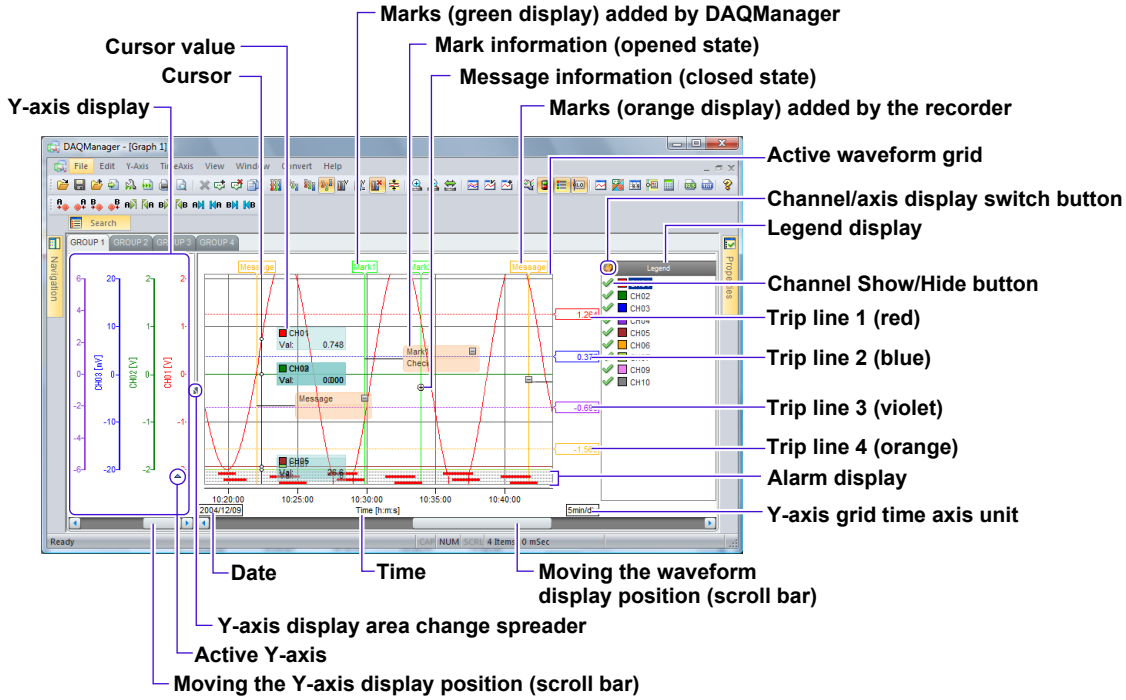
On the menu bar, click **Edit** > **Copy to clipboard**, or press **Ctrl + C**.
The waveform display on screen is copied to the clipboard as bitmap data.

Explanation

Graphs can be searched by time, tag name, group name, mark, message, or graph name.
Saved graphs cannot be displayed with the viewers of our software DAQSTANDARD or DAQEXPLORER.
Graphs also can be saved with “Data” selected in the navigation window. When “Graph” is selected, the saved graph name is displayed.
If you display [Graph], the display is based on the display settings at the time the graph was saved rather than the waveform display default settings (see section 4.1).

4.3 Names of Parts on the Waveform Display Screen and their Display

Names of parts on the waveform display screen and operation outline



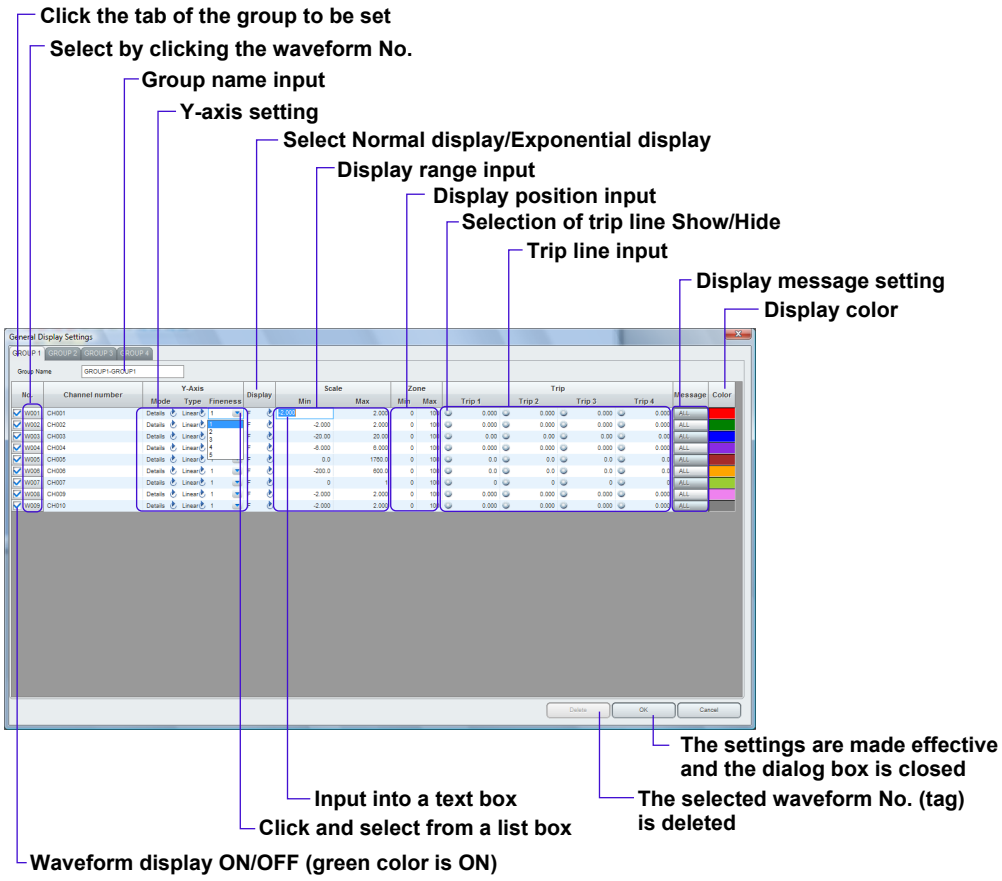
The functions of the parts in the waveform display area and the display contents are as shown below.

- The display area can be changed by dragging the Y-axis display area change spreader to the left or the right.
- The left/right display of waveform display is the range from the data start time to the stop time.
- The Y-axis grid only displays active waveforms.
- The alarm level is from 1 to 4 and the occurrence section is displayed with the color of the respective channel.
- The legend area displays the display waveform channel, the axis Show/Hide status, and the axis grouping. Click the legend display channel or axis icon and switch between Show and Hide.
- The legend area can be displayed switched to channel display or to axis display.
- Channel Show/Hide can be set for the legend area.
- Marks added by the recorder are displayed as “Message” in orange. Marks added at the waveform display screen of DAQManager are displayed in green with the set mark name.
- Message information is displayed with a line and can be closed.
- Only active waveforms can display trip lines, and the position of the respective trip lines can be changed by dragging.
- The grid display displayed as a waveform background is the grid display of the active waveform.
- With the waveform display screen active, move the mouse wheel to scroll the waveform display position left and right.

4.4 Waveform Detail Settings

Procedure

1. Select **View > General Display Settings** from the View menu bar or click the **"General Display Settings"** icon.
   The "Genral Display Settings" dialog box is displayed.


Click the tab of the group to be set
Select by clicking the waveform No.
Group name input
Y-axis setting
Select Normal display/Exponential display
Display range input
Display position input
Selection of trip line Show/Hide
Trip line input
Display message setting
Display color
The settings are made effective and the dialog box is closed
Input into a text box
The selected waveform No. (tag) is deleted
Click and select from a list box
Waveform display ON/OFF (green color is ON)

2. Changing the display conditions.

Explanation

Group
Up to 50 groups can be set. Up to 100 tags can be registered per group.

Waveform display ON/OFF
Check the box of the waveform No. to be displayed.

Scale (display range)
A scale is displayed in the Y-axis display area of the waveform display screen.
The input range for the maximum value and the minimum value is from -1E16 to 1E16.

Zone (display position)

The input range is as shown below.

- Minimum value: 0 to 99 %
- Maximum value: 1 to 100 %

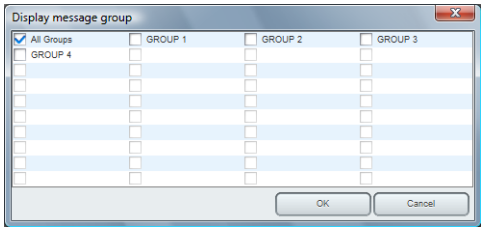
The waveform display position is set with the lower edge of the waveform display area of the waveform display screen as 0 % and the upper edge as 100 %. When the zone display area is clicked, numerical input becomes possible.
When the Y-axis mode setting is “Y-axis free mode”, display is made with the set zone.

Trip lines

Four settings (trip 1 – red/trip 2 – blue/trip 3 – violet/trip 4 – orange) are possible for each waveform. Only the trip lines of active waveforms are displayed on the waveform screen. On the waveform display screen, the display position of trip lines can be changed by dragging. When the trip line value display area on the “Detail settings” screen of waveform display is clicked, numerical input becomes possible.

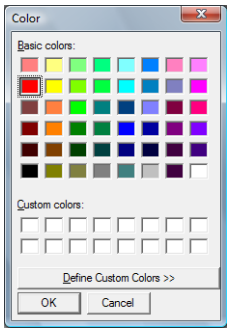
Display messages

Messages to be displayed can be set. Clicking displays the “Display message group” screen. The display **group to be registered to the recorder** is displayed on this screen. Check a group to be displayed.



Display color

The color of each waveform can be displayed. Clicking displays the “Set color” screen. To set any color, click the **[Define Custom Colors]** button of the “Color” dialog box.

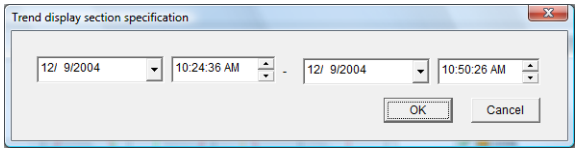


4.5 Changing the Waveform Display

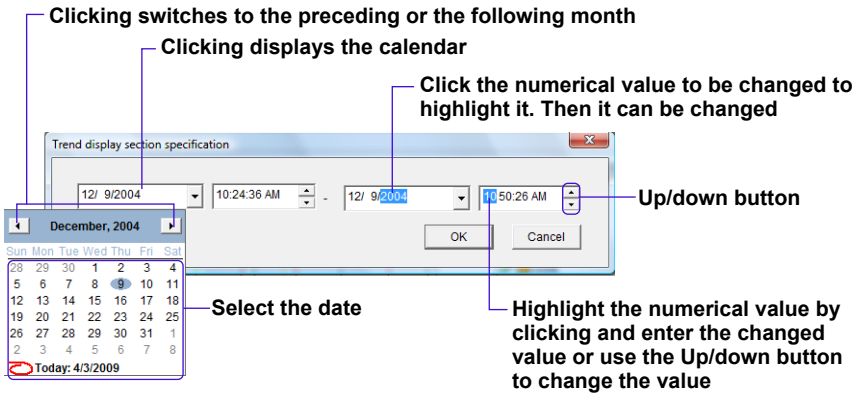
Zoom in / zoom out time axis

Procedure

1. Select **Time Axis > Zoom in, Zoom out**, or **Time axis Form to** from the menu bar or click the **"Zoom in"** icon, the **"Zoom out"** icon, or the **"Time axis specification display"** icon.
   When time specification is selected, the "Trend display section specification" dialog box is displayed.



2. Set the date and time to be displayed.
   The set section is displayed as waveform display.
3. Set the time and the date.


Clicking switches to the preceding or the following month
Clicking displays the calendar
Click the numerical value to be changed to highlight it. Then it can be changed
Trend display section specification
12/ 9/2004
10:24:36 AM
12/ 9/2004
10:50:26 AM
Up/down button
December, 2004
Sun Mon Tue Wed Thu Fri Sat
Today: 4/3/2009
OK
Cancel
Select the date
Highlight the numerical value by clicking and enter the changed value or use the Up/down button to change the value

Explanation

Time axis maximum setting: One grid interval of the time axis represents 3 months.
Time axis minimum setting: One grid of the time axis is displayed as 50 ms.
The initial setting is 10 seconds for one grid, and the width of one grid can be changed as follows.

50 ms, 100 ms, 500 ms, 1 s, 5 s, 10 s, 30 s, 1 min, 5 min, 10 min, 30 min, 1 h, 2 h, 3 h, 4 h, 6 h, 8 h, 12 h, 1 day, 7 days, 1 month, 3 months

When DST is used with time axis display with one day or more for one grid, the width of one grid is changed, and the grid line is always displayed at 0 hours.
When 1 grid interval is 3 months, grid lines are fixed for January, April, July, and October. Grid lines are plotted on the hour.

(Continued on the next page)

A grid of 1 hour/div or more shows the plotted time and time axis scale of contraction scale.

Time axis contraction scale and grid position

Contraction scale	Grid position
1hour/div	00:00:00, 1:00, 2:00. ..., 23:00
2hour/div	0:00, 2:00, 4:00, 6:00, 8:00, 10:00, 12:00, 14:00, 16:00, 18:00, 20:00, 22:00
3hour/div	0:00, 3:00, 6:00, 9:00, 12:00, 15:00, 18:00, 21:00
4hour/div	0:00, 4:00, 8:00, 12:00, 16:00, 20:00
6hour/div	0:00, 6:00, 12:00, 18:00
8hour/div	0:00, 8:00, 16:00
12hour/div	0:00, 12:00
1day/div	1st 00:00:00, 2nd, 3rd, ..., 31st
7day/div	Monday of each week 00:00:00
1month/div	Jan 1st 00:00:00, Feb 1st, ..., Dec 1st
3month/div	Jan 1st, April 1st, July 1st, Oct 1st

However, there are restrictions. The maximum number of data that can be compressed per pixel is 10,000. (For data of 1-second intervals, the maximum contraction scale is 7 days/div.) Data cannot be compressed beyond this restriction. Note that if the restriction is exceeded through an additional display, the compression ratio is adjusted, and message M10021 is displayed (see section 5.1).

Display with time specification

The specified time range is displayed.

Changing the waveform thickness

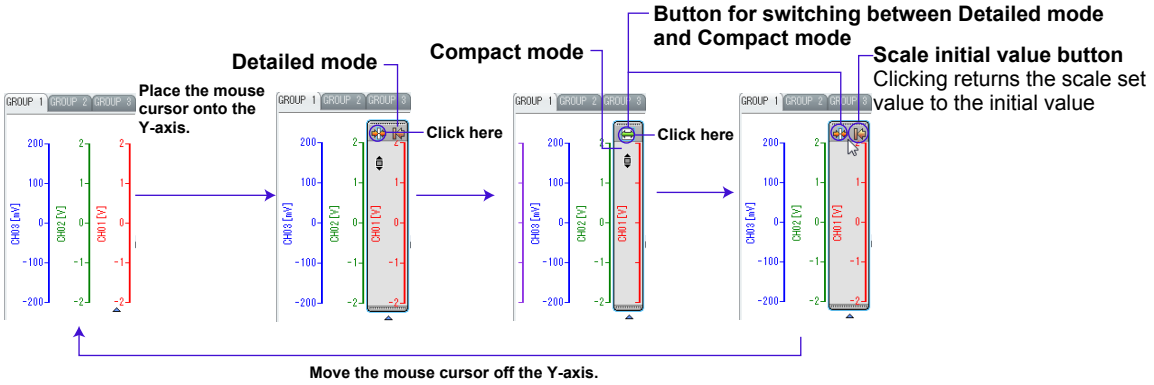
On the menu bar, click **Display** > **Thickness of wavy line** > **Normal**, **Middle**, or **Thick**.

Y-axis display switching

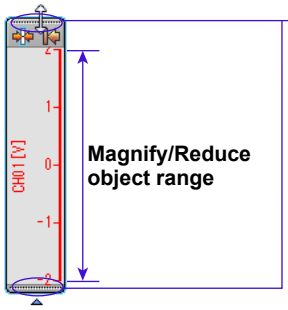
The Y-axis display has a Detailed mode and a Compact mode. The waveform display zone can be selected.
The Y-axis width is adjusted automatically according to the number of display digits.

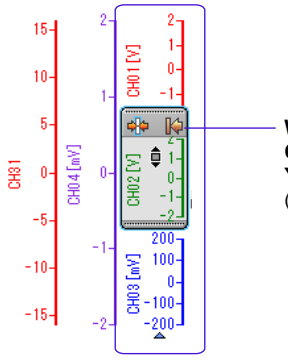
Switching between Detailed mode and Compact mode

The display state changes when the mouse cursor is moved or a button on the Y-axis is clicked.
At that time, the Y-axis width is adjusted automatically according to the number of display digits.


Button for switching between Detailed mode and Compact mode
Scale initial value button
Clicking returns the scale set value to the initial value
Detailed mode
Compact mode
Place the mouse cursor onto the Y-axis.
Click here
Click here
Move the mouse cursor off the Y-axis.

Detailed mode display position change (only at the time of Y-axis free mode)

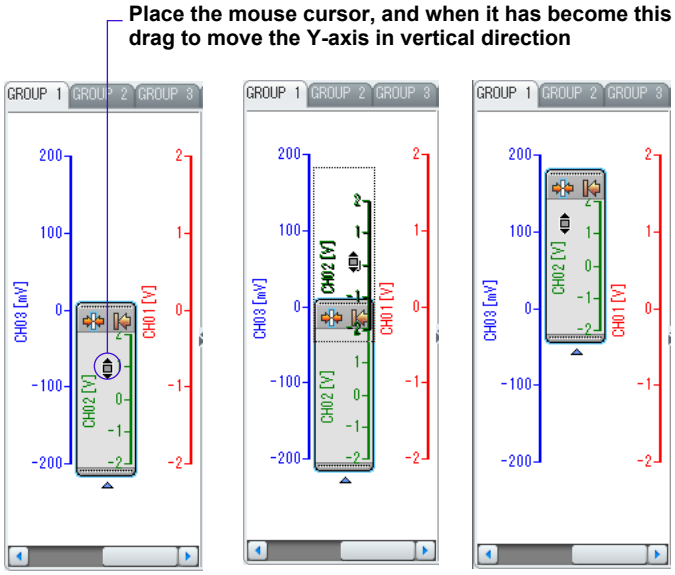




(Continued on the next page)

Vertical movement of the Y-axis

The operation examples for detailed mode are shown below. The same movement is also made in compact mode.

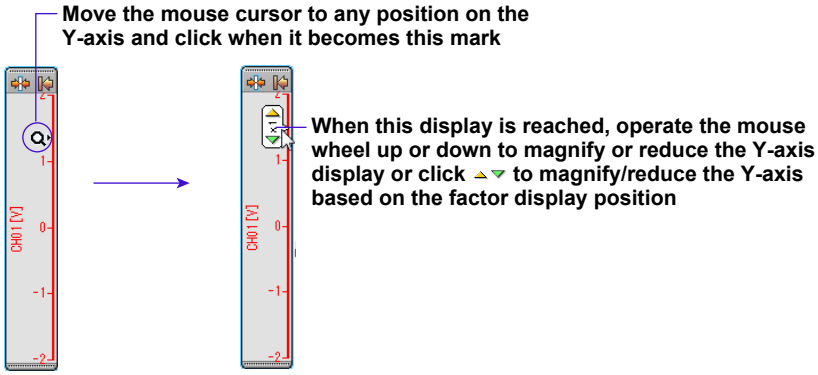

Place the mouse cursor, and when it has become this mark, drag to move the Y-axis in vertical direction
GROUP 1
GROUP 2
GROUP 3
CH03 [mV]
CH02 [V]
CH01 [V]
Dragged state
State when moved up

Y-axis zoom in/zoom out

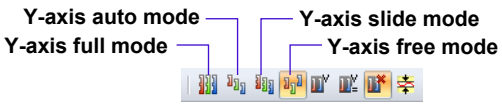
The operation examples for detailed mode are shown below. The same operation is also performed in compact mode.

Zoom in/zoom out is centered around the point where the mouse is clicked.

The factors are 20, 10, 5, 2, 1, 1/2, 1/5, 1/10, and 1/20.


Move the mouse cursor to any position on the Y-axis and click when it becomes this mark
When this display is reached, operate the mouse wheel up or down to magnify or reduce the Y-axis display or click ▲▼ to magnify/reduce the Y-axis based on the factor display position
CH01 [V]

Y-axis mode switching



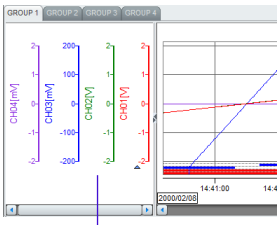
Select from the following. The display examples for each zone are shown on the next page.

- Y-axis full mode : Full zone display for all waveforms
- Y-axis auto mode : The waveform display area is displayed uniformly divided according to the number of tags.
- Y-axis slide mode : The tags are displayed in the waveform display area sequentially from the top.
- Y-axis free mode : Each tag is displayed in the display range set by “Zone” in the “Detail settings” dialog box (Y-axis resizing is possible).

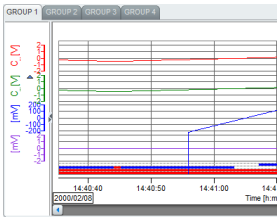
(Continued on the next page)

Setting examples for each zone are shown below.

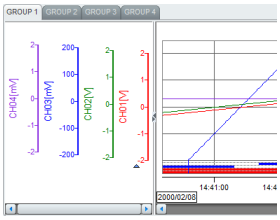
Example for Y-axis full mode



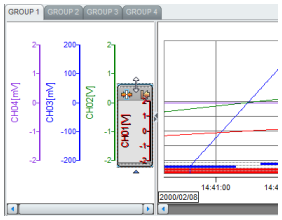
Example for Y-axis auto mode



Example for Y-axis slide mode

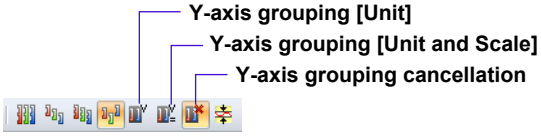


Example for Y-axis free mode



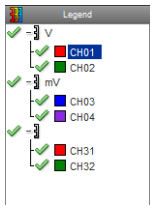
Y-axis grouping and cancellation

Select **Y-Axis > Grouping > Unit grouping, Unit scale grouping, or Cancel grouping**, or click the following icon.



- **Y-axis grouping [Unit]**
  Waveforms with the same unit text string are allotted to one Y-axis. Different Y-axis types (line type, logarithms) cannot be grouped. In case of different scales or zones, the range including all scales or zones becomes the scale or zone. Grouped tags can be confirmed in the Legend area.

  Examples for groupings

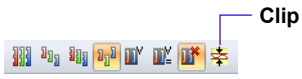


- **Y-axis grouping [Unit and Scale]**
  Waveforms where the unit text string and the original scale are the same are allotted to one Y-axis. Different Y-axis types (line type, logarithms) cannot be grouped.

- **Y-axis grouping cancellation**
  The grouping is cancelled. Return is made to the state before grouping. However, when the scales or zones are different, a scale or zone including all scales or zones is used, so that return to the original state is not made when grouping is cancelled.

Waveform display restrictions

Select **Y-Axis > Clip** from the menu bar or click the following icon.



Restriction of the waveform display range in Y-axis direction is possible from the minimum value to the maximum value set with “Scale” in the “General Display Settings” dialog box. Measuring values smaller than the minimum scale value are displayed pasted to the minimum value, and measuring values larger than the maximum scale value are displayed pasted to the maximum value.

- **Examples for restricted display**

- **Examples for unrestricted display**

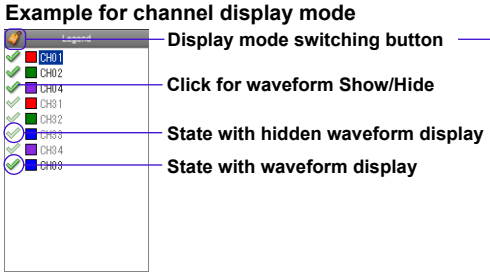
Legend display switching

Select **View > Legend** from the menu bar or click the following icon to switch between showing and hiding the legend.

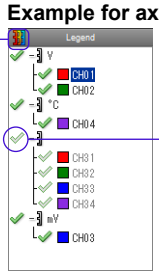
Legend has a channel display mode and an axis display mode.

- **Channel display mode**
  Channel display is made. Show or Hide can be selected for each axis.
- **Axis display mode**
  Y-axis and channel are displayed.
  In case of grouping, hierarchical display is made for each unit or group.
  Show or Hide can be selected for all axes.

Example for channel display mode

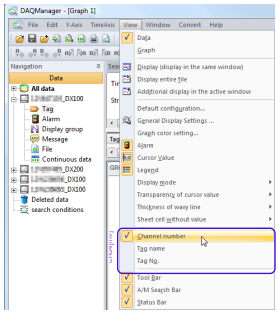


Example for axis display mode

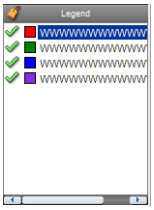


All waveform display of lower hierarchical levels hidden

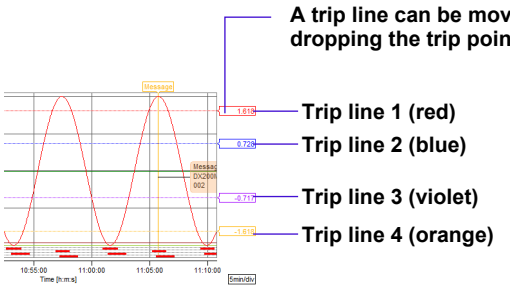
Either the channel name, tag name, or tag number is used as an identifier for channels in the legend. You can switch the identifier by clicking **View** on the menu bar followed by **Channel number, Tag name,** or **Tag No.**



When Tag name is selected

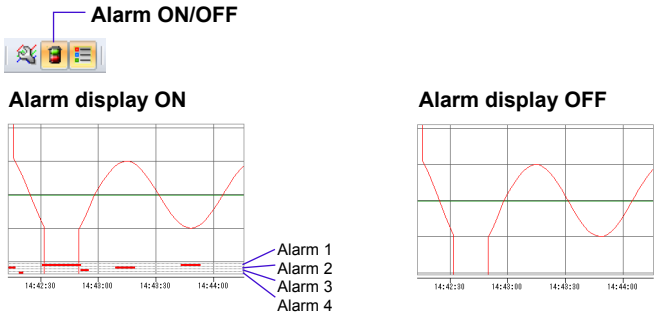


Moving trip lines


A trip line can be moved by dragging & dropping the trip point numerical frame.
Trip line 1 (red)
Trip line 2 (blue)
Trip line 3 (violet)
Trip line 4 (orange)

Alarm display ON/OFF

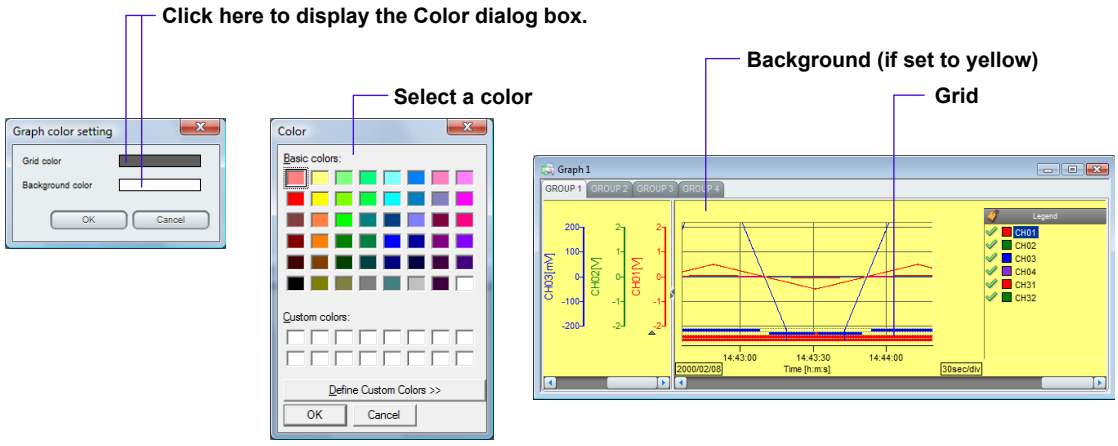
Select **View > Alarm** from the menu bar or click the following icon to show/hide alarms on the waveform display screen.



Changing the graph color

Click **View > Graph Color Setting** on the menu bar to display the Graph color setting dialog box.

You can change the grid and background colors.



4.6 Displaying Digital Values

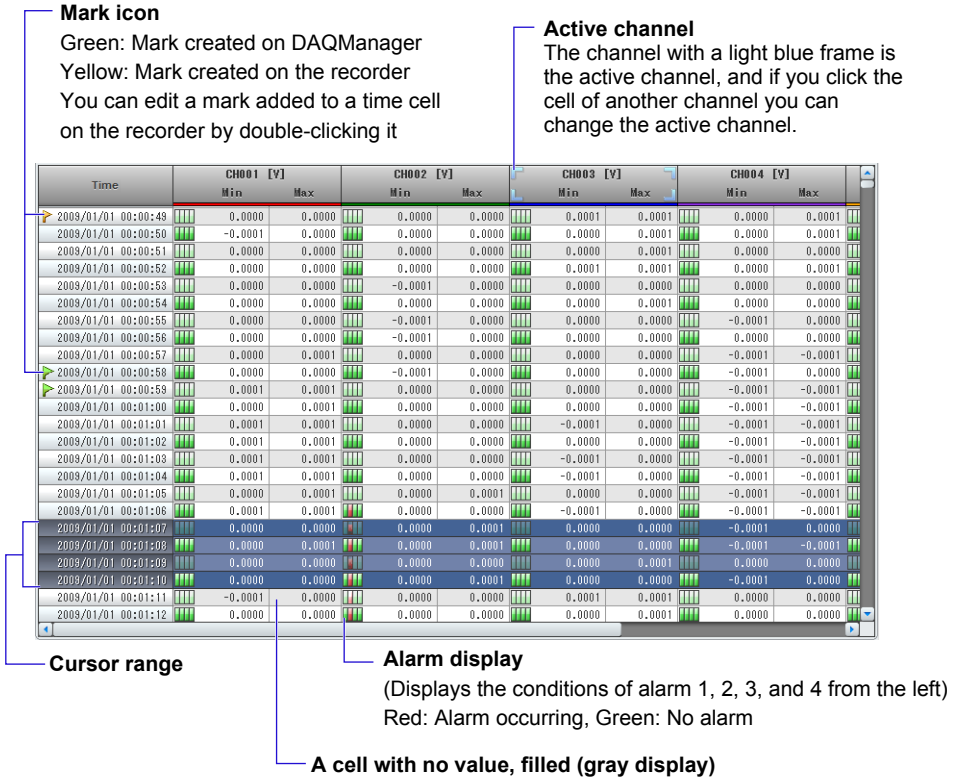
You can display digital values of waveform-displayed tags in spreadsheet format. When displaying data of different intervals, the value of time for which there is no data is displayed as the previous value or the subsequent value.

Procedure

Displaying digital values

1. After displaying waveforms of the data that you wish to display as digital values, make the data active, then click **Window** > **Digital value display** on the menu bar, or click the [Digital value display] icon.

Digital values can be displayed in spreadsheet format.


Mark icon
Green: Mark created on DAQManager
Yellow: Mark created on the recorder
You can edit a mark added to a time cell on the recorder by double-clicking it
Active channel
The channel with a light blue frame is the active channel, and if you click the cell of another channel you can change the active channel.
Time
CH001 [V]
CH002 [V]
CH003 [V]
CH004 [V]
Min
Max
Cursor range
Alarm display
(Displays the conditions of alarm 1, 2, 3, and 4 from the left)
Red: Alarm occurring, Green: No alarm
A cell with no value, filled (gray display)

Setting values for time for which no data exists

2. On the menu bar, click **Display** > **Digital display of Cell without value** > **Padding**, or **Not padding**.

Copy to clipboard

2. On the menu bar, click **Edit** > **Copy to clipboard**, or press **Ctrl + C**.

Explanation

Displaying digital values

Cursor and active channel switching is linked with waveform display and list display (alarm lists and mark lists).
A mark icon is displayed at times for which there are marks or messages.
The digital value display limit is 100 million data. (Waveform data exceeding 100 million data points cannot be displayed. The menu is invalid.)
Time may be required for processing when displaying large quantities of data digitally.

Setting values for time for which no data exists

When [Padding] is selected, cells are filled with the previous values (display data) or subsequent values (event data). Padded data is displayed in gray.
When [Not padding] is selected, it is blank.

Copy to clipboard

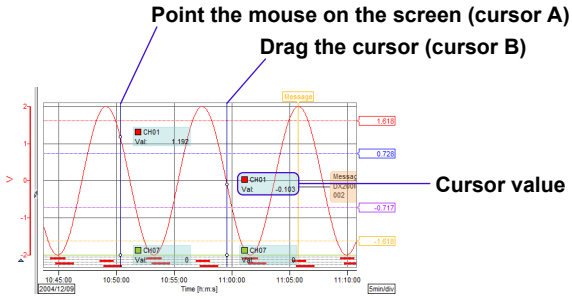
When cursors are displayed, the cursor range is copied. If cursors are set to No Display, the range is not copied.
The maximum number of lines that can be copied is 1000.

4.7 Cursor Use

Cursor display/delete

Cursor display

When any location is pointed at and dragged, a cursor is displayed at the position initially pointed at and at the dragged point. The cursor value of the waveform at the initial pointing location is displayed.

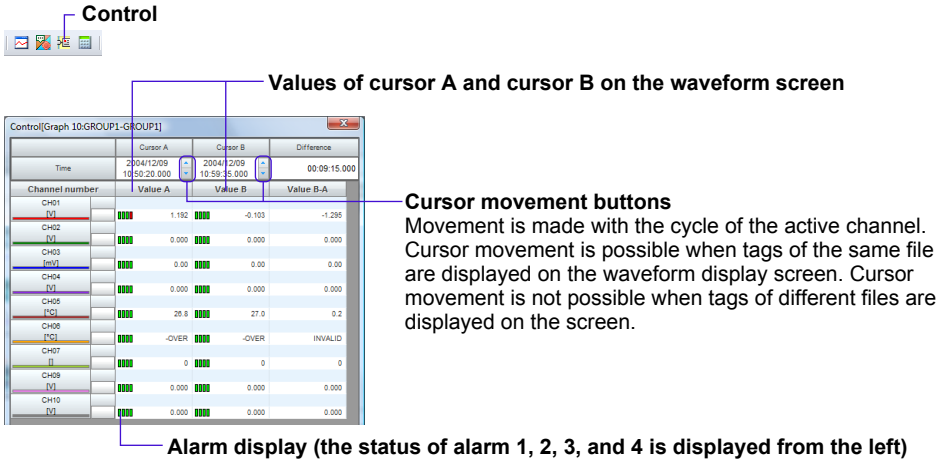


Cursor deletion

Select **Edit > Erase cursor** from the menu bar.

Cursor value display

Select **Window > Cursor control** from the menu bar or click the **"Control"** icon to display the "Control" screen.


Control
Values of cursor A and cursor B on the waveform screen
Control[Graph 10:GROUP1-GROUP1]
Cursor movement buttons
Movement is made with the cycle of the active channel. Cursor movement is possible when tags of the same file are displayed on the waveform display screen. Cursor movement is not possible when tags of different files are displayed on the screen.
Alarm display (the status of alarm 1, 2, 3, and 4 is displayed from the left)

The values of cursor A and cursor B on the waveform screen and the difference value are displayed as list display. When a cursor movement button is clicked, the values of cursor A and cursor B can be changed.

The alarm status is displayed when alarm display is ON. Red display is made when an alarm has occurred and green display is made when no alarm has occurred.

Digital value display of abnormal data

Abnormal data are displayed as shown below.

- +OVER: Measured/computed data are over the positive limit
- OVER: Measured/computed data are under the negative limit
- LACK: Calculation error or data dropout

Note

When a cursor is not displayed on the waveform display screen, the cursor's value area becomes blank. "Value B-A" become INVALID.

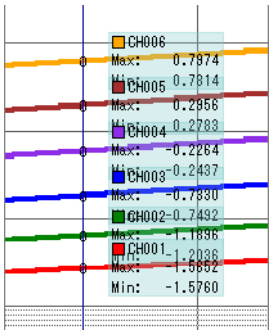
Changing Display/No Display of cursor values

On the menu bar, click **Display** > **Cursor Value**, or click the cursor value display switching icon. (See the figure below, “Example of cursor values not displayed.”)
The cursor value Display/No display setting is saved in the waveform display conditions (graph).

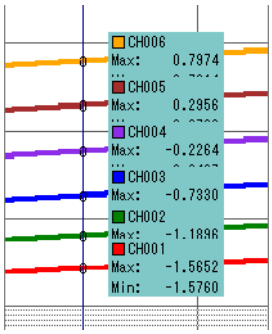
Changing the cursor value transparency

You can set the transparency used when displaying cursor values. The transparency setting is saved with the waveform display conditions (graph).
On the menu bar, click **Display** > **Transparency of cursor value** > **Translucence**, or **Opacity**.
Translucence: The display beneath the cursor value display is visible.
Opacity: No translucence.

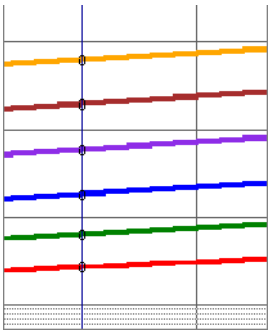
Example of translucent display



Example of opaque display

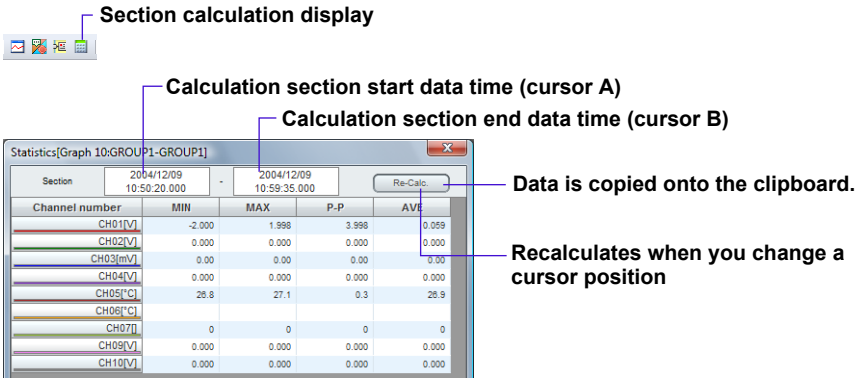


Example of cursor values not displayed



Section calculation value display

Select **Window > Statistics** from the menu bar or click the **“Section calculation display”** icon to display the “Statistics” screen.

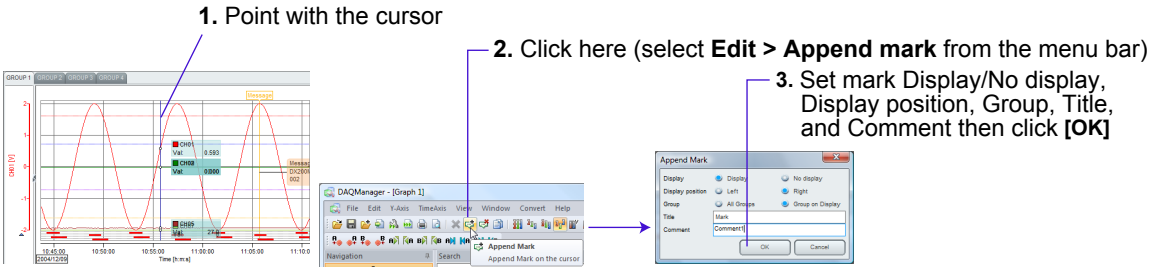


Minimum value, maximum value, P-P value, and mean value are calculated and displayed for each waveform in the range selected with cursor A and cursor B. When no cursors are displayed, calculation is performed for all data.
As the calculation results are not linked to cursor A and cursor B, update the calculation result by clicking the **[Re-Calc.]** button on the “Statistics” screen when the positions of cursor A and cursor B have changed.
If you click the [Copy to clipboard] button, the text data of statistics is copied to the clipboard.

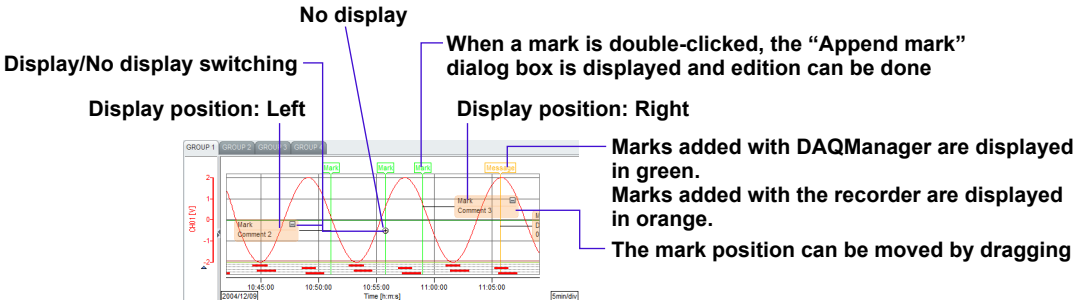
Note

If the display data is data in waveform display, the average values of section value calculation cannot be displayed.

Adding a mark


1. Point with the cursor
2. Click here (select Edit > Append mark from the menu bar)
3. Set mark Display/No display, Display position, Group, Title, and Comment then click [OK]

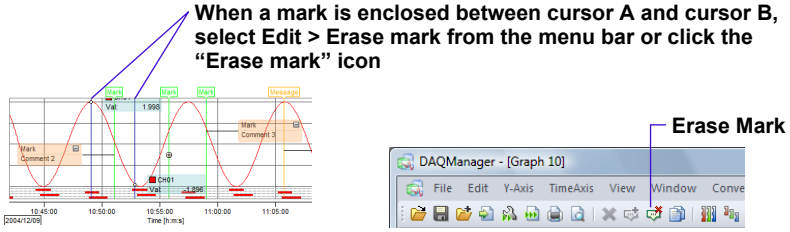
When cursor A and cursor B are at the same position, an optional mark can be added. Select whether the optional mark is to be added in common for all groups or only for the displayed group. The mark title and the display positions for the comment also can be selected. The mark title can be entered with up to 60 single-byte characters, and the mark comment can be entered with up to 250 single-byte characters.


No display
Display/No display switching
When a mark is double-clicked, the "Append mark" dialog box is displayed and edition can be done
Display position: Left
Display position: Right
Marks added with DAQManager are displayed in green.
Marks added with the recorder are displayed in orange.
The mark position can be moved by dragging

Message display

For messages created with the recorder, Show or Hide can be selected by selecting the group displaying the message in the "General Display Settings" dialog box for each tag. The group at this time is not the group name displayed in the DAQManager graph, but the display group in the file set by the recorder. Multiple groups or all groups can be selected for message display, and setting is possible for each tag. Hiding with no selection is also possible.

Mark deletion

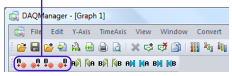

When a mark is enclosed between cursor A and cursor B, select Edit > Erase mark from the menu bar or click the "Erase mark" icon
Erase Mark
DAQManager - [Graph 10]
File Edit Y-Axis TimeAxis View Window

Marks added with the recorder (displayed as "Message") cannot be edited or deleted.

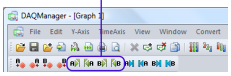
Search for alarm change points, mark/message positions, and start/stop

Select **Edit > Search Alarm, Search Mark, or Search Start/Stop** from the menu bar.

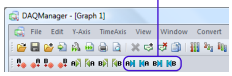
Search for an alarm change point
Click any one



Search for a mark/message position
Click any one



Search for a start/stop position
Click any one



Search for an alarm change point

Move cursor A or cursor B to an alarm change point (alarm occurrence point/recovery point from an alarm occurrence state) of an active channel. Search is possible in the direction to the right of the cursor or in the direction to the left of the cursor.

Tool bar menu	Operation
Right move cursor A	Cursor A jumps to an alarm on the right side.
Left move cursor A	Cursor A jumps to an alarm on the left side.
Right move cursor B	Cursor B jumps to an alarm on the right side.
Left move cursor B	Cursor B jumps to an alarm on the left side.

Search for a mark/message position

Cursor A or cursor B is moved to a mark position (any mark/trigger mark) of an active group. Search is possible in the direction to the right of the cursor or in the direction to the left of the cursor.

Tool bar menu	Operation
Right move cursor A	Cursor A jumps to a message or a mark on the right side.
Left move cursor A	Cursor A jumps to a message or a mark on the left side.
Right move cursor B	Cursor B jumps to a message or a mark on the right side.
Left move cursor B	Cursor B jumps to a message or a mark on the left side.

Search for start/stop

Cursor A or cursor B is moved to the start position or the stop position of an active channel.

Tool bar menu	Operation
Right move cursor A	Cursor A jumps to a start/stop position on the right side.
Left move cursor A	Cursor A jumps to a start/stop position on the left side.
Right move cursor B	Cursor B jumps to a start/stop position on the right side.
Left move cursor B	Cursor B jumps to a start/stop position on the left side.

Note

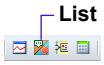
- The search function cannot be used when no cursor is displayed.
- The search function cannot be used when there is no mark or when alarm display is OFF.

4.8 Alarm List/Mark List Display

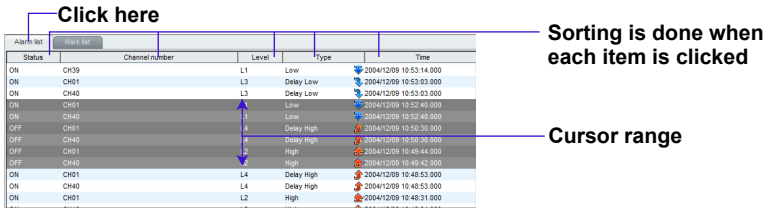
Alarms and marks are displayed as lists when a display file/event file is open.

Procedure

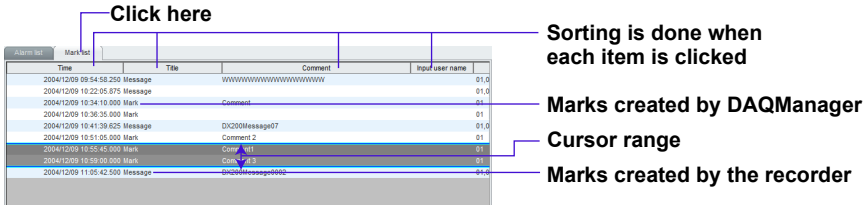
1. Select **Window > Alarm/Mark** from the menu bar or click the **"List"** icon.



2. Click the alarm list tab. The alarm list screen is displayed.



3. Click the mark list tab.
   The mark list screen is displayed.


Click here
Sorting is done when each item is clicked
Marks created by DAQManager
Cursor range
Marks created by the recorder

Explanation

When items are clicked in the "Alarm list" or in the "Mark list", sorting is done by these items. The first click sorts in ascending order and the second click sorts in descending order. Alarms, marks, and messages related to the displayed waveform display screen are displayed. Linking is made with the waveform cursor and the respective range becomes selected. The range dragged on the "Alarm list" or the "Mark list" screen is linked to cursor A and cursor B of the waveform display screen. When the cursors are operated on the waveform display screen, cursor display is made when there are marks in the respective data for the cursor movement position. When there are marks in the range selected with cursor A and cursor B, cursor range display is made with alarm/message list display. Mark time display shows the time of creation/editing and not the time of position change. The "Mark list" differentiates between messages created by devices and marks created by DAQManager.

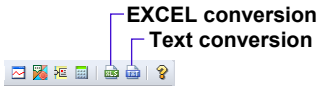
4.9 Data Format Conversion

Excel or text conversion can be performed on data being displayed, or on files.
Also, watch folder data can be converted to Excel or text upon import (automatic conversion).
The file header (file message and batch information) is included in the conversion.

Procedure

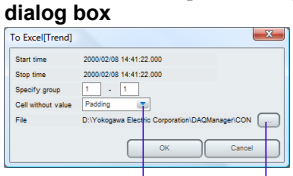
Converting displayed waveform data

1. On the menu bar, click **Convert** > **Excel conversion**, or **Text conversion**, or click the [EXCEL conversion] or [text conversion] icon.

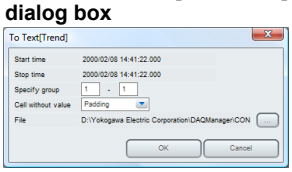


The To Excel[Trend] or To Text[Trend] dialog box is displayed.

Excel conversion [waveform] dialog box



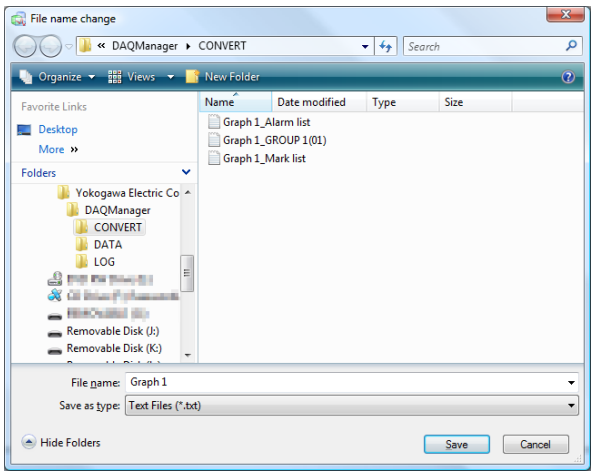
Text conversion [waveform] dialog box



Browse button

Click and select from the list

2. Specify the group, whether or not to fill cells with no value, the file save destination, and save file name. To specify a file save destination and file name, click the [Browse] button.
The [File name change] dialog box appears.



3. Click the [OK] button.

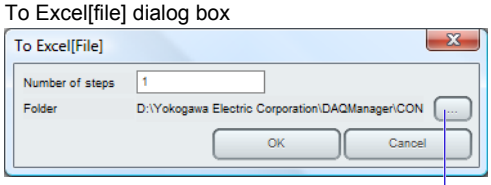
Data conversion by file

1. In the navigation window, click [File], then select the files you want to convert to data.

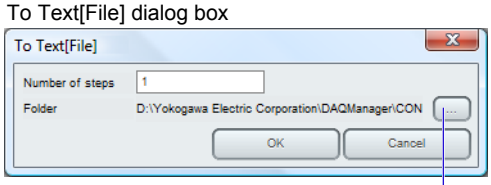
   Multiple files can be selected at once.

2. On the menu bar, click **Convert** > **To Excel[File]** or **To Text[File]**.
   The To Excel[File] or To Text[File] dialog box is displayed.

To Excel[file] dialog box

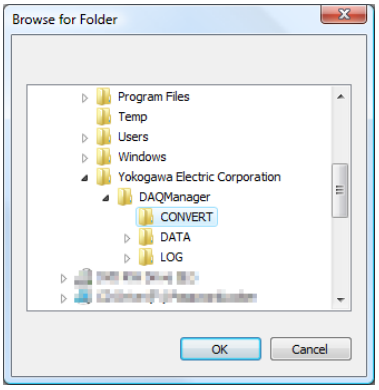


To Text[File] dialog box



Browse button

3. Set the number of steps and folder for the data to convert. To specify a folder, click the [Browse] button.
   The [Browse folders] dialog box is displayed.

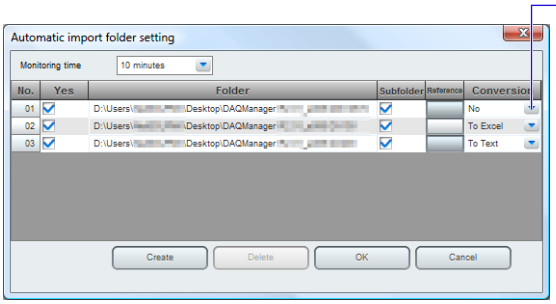


4. Set the file name and file type, then click the [Save] button.
   The data is saved.

Conversion of watch folder data

1. Perform steps 1 through 3 under Automatic import [Folder specification] (see section 2.1, “Automatic file import”).
2. In the [Automatic import folder setting] dialog box, set the data conversion kind.

Click and select a data conversion kind from the list



Watch folder data is converted to the specified format upon file import, and is saved to the same folder as the watch folder.
The conversion method is the same as that for data conversion by file, and the number of steps is fixed at 1.

Explanation

If the data targeted for conversion that is being waveform displayed has multiple intervals and no values, you can specify to use nearby data to fill it in, or to leave it blank. Event data is filled in with previous values, and display data is filled in with subsequent values. For [Cell without value] in the conversion dialog box, set [Padding] or [Not padding]. Regarding alarms, marks, and messages, conversion results are saved to separate sheets within the same file.

Settings for Excel/Text conversion of data under waveform display

Setting item	Description
Start tim	Cannot be changed
	When cursors displayed: time at left cursor position
	When cursors not displayed: start time
Stop time	Cannot be changed
	When cursors displayed: time at right cursor position
	When cursors not displayed: stop time
Specify group	Set from 1 to 50 groups
Cell without value	Fill with previous values, fill with subsequent values, or leave blank

Set conversion to Excel or text by file (same as automatic conversion of watch folder)

Setting item	Description
Number of steps	Specify the number of steps of data to convert Number of steps specification range: unlimited, default is 1 step 1 step: all data converted 1st data must be converted
Folder	Specify location for changed data

Excel and text conversion specifications

Data is converted to Excel or text per the following specifications. Conversion specifications for watch data are the same as those for conversion by file.

Specifications for conversion to Excel of data under waveform display

Item	Description
Format	Excel 98 worksheet
Group	Separated by sheet
Initial file name setting	When converting from waveform display screens: graph.xls
Restriction	If the limits of Excel are exceeded, conversion results are assigned a serial number and divided
Alarm/mark conversion	Marks and alarms are converted at the same time as the waveform conversion, and saved to a separate sheet in the same file

Specifications for conversion to text of data under waveform display

Item	Description
Format	Tab delimited text file
Group	Files divided File name: filename_groupname(group number).txt Example: Graph1_Group1(01).txt
Initial file name setting	When converting from waveform display screens: graph.txt
Restrictions	If the limits of Excel are exceeded, conversion results are assigned a serial number and divided
Alarm/mark conversion	Marks and alarms are also converted and saved when waveforms are converted Mark file: filename_marklist.txt Alarm file: filename_alarmlist.txt

Specifications for Excel conversion by file, and automatic Excel conversion of watch data

Item	Description
Format	Excel98 worksheet
Channel specification	Fixed to All Channels
File name	Datafilename.xls If the Excel limit (65536 rows) is exceeded: Serial number is assigned to the file, and the conversion results are divided If files of the same name occur: Serial number assigned to the file If the Excel limit (256 columns) is exceeded: Divided into separate sheets within the same file
Conversion of marks/ messages	Added as a separate sheet within the same file sheet name: marklist
Alarm conversion	Added as a separate sheet within the same file sheet name: alarmlist

Specifications for text conversion by file, and automatic text conversion of watch data

Item	Description
Format	Tab delimited
Channel specification	Fixed to All Channel
File name	Filename.txt If a file of the same name exists: Serial number assigned to the file
Conversion of marks/ messages	File name: datafilename_marklist.txt
Alarm conversion	File name: datafilename_alarmlist.txt

Note

- The group No. set for the presently displayed group is the initial setting for the group specification.
- The save destination file name becomes the displayed file name with automatic addition of an extension identifying the data format. The extension “txt” is added in case of text conversion, and the extension “xls” is added in case of Excel conversion.
- Excel has restrictions for the number of data which can be handled. Even when the number of data to be converted is below the restriction, data may not be read in when the free memory of the personal computer is not sufficient. When the limit is exceeded, conversion output is made with automatic division. A consecutive number is added to the file name.
- As saving takes time, do not specify an exterior medium such as a floppy disk etc. as the file write target.
- Do not specify a root directory for the file save destination.
- Reserve a sufficient free disk capacity as the write target.
- If converting waveforms with a large number of groups, it is possible that the Excel data cannot be read in. In such a case, divide the range of the specified groups and create conversion data. For example, in case of 30 groups, divide into groups 1-10, 11-20, and 21-30 and convert to Excel.

Conversion format for data being displayed as waveforms

If cursors are displayed, only the data in the cursor range is converted.

Conversion format when tags of multiple files are displayed

1	DAQManager Rx.xx.xx				
2					
3	Graph name	Graph 3			
4	Start time	2009/3/25	18:23:39	0.000	
5	Stop time	2009/3/25	18:23: 40	0.000	
6	Group name	Group 01(01)			
7					
8			Channel name	CH005	
9			Tag name	ato5	
10			Tag no.	Tag1	
11			Unit	°C	
12	Date	Time	Sec.	Min	Max
13	2009/3/25	18:23:39	0.000	552.7	+OVER
14	2009/3/25	18:23:40	0.000	552.7	+OVER

If it is the same start/stop (single batch), the conversion format becomes “conversion format when a single tag is displayed,” below.

Conversion format when a single tag is displayed

1	DAQManager Rx.xx.xx						
2							
3	Batch name		Batch No.+Lot No.				
4	File header		HEADER				
5	Instrument type		DX200				
6	Serial No.		SERIAL_300				
7							
8	Time Correction		None				
9	Start time		2009/7/13	12:55:40	0.000		
10	Stop time		2009/7/14	12:55:45	0.000		
11	Start Cond.		AUTO				
12	End Cond.		AUTO				
13	Acquisition interval		1	sec			
14							
15	Graph name	Graph 3					
16	Start time	2009/7/13	12:56:39	0.000			
17	Stop time	2009/7/13	18:23:40	0.000			
18	Group name	Group 01(01)					
19							
20	Batch text 1		App Name				
21	Batch text 2		Supervisor				
22	Batch text 3		manager				
23	Batch text 4						
24	Batch text 5						
25	Batch text 6						
26	Batch text 7						
	...						
43	Batch text 24						
44	Batch Comment 1		Comment	2009/7/13	12:55:40	0.000	Admin1
45	Batch Comment 2						
46	Batch Comment 3						
47							
48			Channel name	CH001			
49			Tag name	TAG1			
50			Tag no.				
51			Unit	V			
52	Date	Time	Sec	MIN	MAX		
53	2009/7/13	12:55:40	0.000	0.0000	0.0000		
54	2009/7/13	12:55:41	0.000	0.0000	0.0001		

Conversion format of data by file

For Excel conversion, the Date cell takes date format, the Time cell takes time format, and the start and end times each take the date/time format.
If the file is divided due to the restriction on number of rows, headers are added to all the files. Also, if the results are divided into multiple sheets within the file due to the restriction on the number of columns, headers are added to all the sheets.

The format is described below. The format for Excel and text conversion is the same.
DX/DXAdvanced/MVAdvanced (Batch function Off) format

1	DAQManager Rx.xx.xx					
2						
3	Batch name					
4	File header		HEADER			
5	Instrument type		DX2000			
6	Serial No.		SERIAL_300			
7						
8	Time Correction		None			
9	Start time		2009/7/13	12:55:40	0.000	
10	End time		2009/7/13	12:55:45	0.000	
11	Start Cond.		AUTO			
12	End Cond.		AUTO			
13	Number of tags		1			
14	Data Count		6			
15	Acquisition interval		1	sec		
16						
17			Channel name	CH001		
18			Tag name	TAG1		
19			Tag no.			
20			Unit	V		
21	Date	Time	Sec	MIN	MAX	
22	2009/7/13	12:55:40	0.000	0.0000	0.0000	
23	2009/7/13	12:55:41	0.000	0.0000	0.0001	

DX/DXAdvanced/MVAdvanced (Batch function On) format

1							
	DAQManager Rx.xx.xx						
2							
3	Batch name		Batch No.+Lot No.				
4	File header		HEADER				
5	Instrument type		DX200				
6	Serial No.		SERIAL_300				
7							
8	Time Correction		None				
9	Start time		2009/7/13	12:55:40	0.0000		
10	End time		2009/7/13	12:55:45	0.0000		
11	Start Cond.		AUTO				
12	End Cond.		AUTO				
13	Number of tags		1				
14	Data Count		6				
15	Acquisition interval		1	sec			
16							
17	Batch text 1		App Name				
18	Batch text 2		Supervisor				
19	Batch text 3		manager				
20	Batch text 4						
21	Batch text 5						
22	Batch text 6						
23	Batch text 7						
	…						
40	Batch text 24						
41	Batch Comment 1		Comment	2009/7/13	12:55:40	0.000	Admin1
42	Batch Comment 2						
43	Batch Comment 3						
44							
45			Channel name	CH001			
46			Tag name	TAG1			
47			Tag no.				
48			Unit	V			
49	Date	Time	Sec	MIN	MAX		
50	2009/7/13	12:55:40	0.000	0.0000	0.0000		
51	2009/7/13	12:55:41	0.000	0.0000	0.0001		

If the Batch function is On, batch texts 1 to 24 are added and batch comments 1 to 3 are added.
Application, Supervisor, and Manager on the DX are filled in with batch text 1 through 3.
There are only up to 8 batch texts on DXAdvanced up to release number 2 (R2), but up to 24 batch texts are output.
If the file is divided due to the restriction on number of rows, headers are added to all the files.
Also, if the results are divided into multiple sheets within the file due to the restriction on the number of columns, headers are added to all the sheets.

Conversion format for alarm lists

The conversion format for alarm lists is the same as that for the data conversion of displayed waveforms or data conversion by file. If cursors are displayed, only the data in the cursor range is converted.

Alarm list conversion example

1	Status	Tag name	Tag no.	Channel name	Level	Type	Date	Time	Sec.
2	ON	ato5	tagA	CH005	L1	Delta High	2009/03/25	18:23:37	0.000
3	ON	ato5	tagA	CH005	L2	Rate High	2009/03/25	18:23:37	0.000
4	OFF	ato5	tagA	CH005	L1	Delta High	2009/03/25	18:23:39	0.000
5	OFF	ato5	tagA	CH005	L2	Rate High	2009/03/25	18:23:39	0.000
6	ON	ato5	tagA	CH005	L1	Delta High	2009/03/25	18:23:40	0.000

The time in the alarm conversion format is divided into Date, Time, and Sec. For Excel conversion, the cell format is Date and Time.

Conversion format for marks and messages

The conversion format for marks and messages is the same as that for the data conversion of displayed waveforms or data conversion by file. If cursors are displayed, only the data in the cursor range is converted.

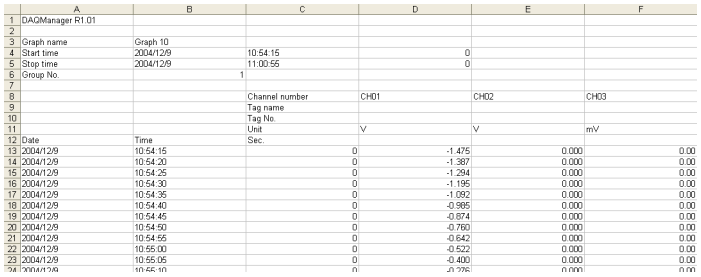
Mark and message conversion example

1	Date	Time	Sec	Title	Comment	Input user name	Group	Operation Time		
2	2009/07/08	15:54:07	0.750	Message			01	2009/07/08	15:54:07	0.900
3	2009/07/08	15:54:08	0.250	Message			01	2009/07/08	15:54:08	0.375
4	2009/07/08	15:54:08	0.750	Message			01	2009/07/08	15:54:08	0.875
5	2009/07/08	15:54:09	0.250	Message			01	2009/07/08	15:54:09	0.375
6	2009/07/08	15:54:09	0.750	Message			01	2009/07/08	15:54:09	0.875

The time in the conversion format for marks and messages is divided into Date, Time, and Sec, and the operation time is also divided into Date, Time, and Sec. For Excel conversion, the cell format is Date and Time.

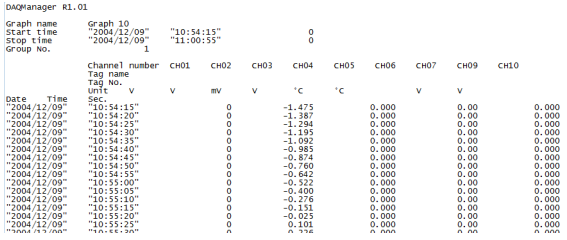
Conversion results display example

Example for Excel conversion



	A	B	C	D	E	F
1	DAQManager R1.01					
2						
3	Graph name	Graph 10				
4	Start time	2004/12/9	10:54:15	0		
5	Stop time	2004/12/9	11:00:55	0		
6	Group No.		1			
7						
8			Channel number	CH01	CH02	CH03
9			Tag name			
10			Tag No.			
11			Unit	V	V	mV
12	Date	Time	Sec.			
13	2004/12/9	10:54:15	0	-1.475	0.000	0.00
14	2004/12/9	10:54:20	0	-1.387	0.000	0.00
15	2004/12/9	10:54:25	0	-1.294	0.000	0.00
16	2004/12/9	10:54:30	0	-1.195	0.000	0.00
17	2004/12/9	10:54:35	0	-1.092	0.000	0.00
18	2004/12/9	10:54:40	0	-0.985	0.000	0.00
19	2004/12/9	10:54:45	0	-0.874	0.000	0.00
20	2004/12/9	10:54:50	0	-0.760	0.000	0.00
21	2004/12/9	10:54:55	0	-0.642	0.000	0.00
22	2004/12/9	10:55:00	0	-0.522	0.000	0.00
23	2004/12/9	10:55:05	0	-0.400	0.000	0.00
24	2004/12/9	10:55:10	0	-0.276	0.000	0.00

Example for text conversion



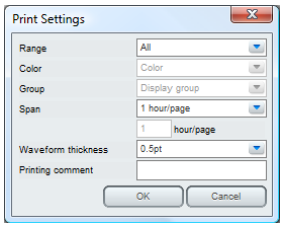
```
DAQManager R1.01

Graph name      Graph 10
Start time      "2004/12/09"    "10:54:15"              0
Stop time       "2004/12/09"    "11:00:55"              0
Group No.               1

                Channel number  CH01    CH02    CH03    CH04    CH05    CH06    CH07    CH09    CH10
                Tag name
                Tag No.
                Unit    V       V       mV      V       °C      °C              V       V
Date    Time    Sec.
"2004/12/09"    "10:54:15"              0       -1.475          0.000           0.00            0.000
"2004/12/09"    "10:54:20"              0       -1.387          0.000           0.00            0.000
"2004/12/09"    "10:54:25"              0       -1.294          0.000           0.00            0.000
"2004/12/09"    "10:54:30"              0       -1.195          0.000           0.00            0.000
"2004/12/09"    "10:54:35"              0       -1.092          0.000           0.00            0.000
"2004/12/09"    "10:54:40"              0       -0.985          0.000           0.00            0.000
"2004/12/09"    "10:54:45"              0       -0.874          0.000           0.00            0.000
"2004/12/09"    "10:54:50"              0       -0.760          0.000           0.00            0.000
"2004/12/09"    "10:54:55"              0       -0.642          0.000           0.00            0.000
"2004/12/09"    "10:55:00"              0       -0.522          0.000           0.00            0.000
"2004/12/09"    "10:55:05"              0       -0.400          0.000           0.00            0.000
"2004/12/09"    "10:55:10"              0       -0.276          0.000           0.00            0.000
"2004/12/09"    "10:55:15"              0       -0.151          0.000           0.00            0.000
"2004/12/09"    "10:55:20"              0       -0.025          0.000           0.00            0.000
"2004/12/09"    "10:55:25"              0        0.101          0.000           0.00            0.000
"2004/12/09"    "10:55:30"              0        0.228          0.000           0.00            0.000
```

4.10 Data Printing

Printer setting

Procedure

1. Select **File > Print Settings** from the menu bar.
   The “Print Settings” dialog box is displayed.



2. Set the items by selecting from the list box or by input into a text box.

Explanation

The active screen (waveform display screen, alarm list, mark/message list) is printed. The display of alarm lists and mark/message lists is switched by tabs, and the displayed list is printed.

The print setting items and the contents are as shown below.

Setting item	Contents
Range	All, cursor range
Color	Color
Group	View group (fixed)
Span	All data/1 page, 1 hour/1 span, 8 hours/1 page, 12 hours/1 page
Hour/page	When selecting Set freely for [Span], you can set the print span per page.
Waveform thickness	0.25 pt, 0.5 pt, 1.0 pt, 1.5 pt, 3.0 pt
Printing comment	Input is possible for up to 250 single-byte characters (printing is done to the upper part of the waveform print).

Note

- In case of printing onto multiple pages by print span setting, the cursor values and the calculation results are also printed from the second page on.
- Depending on the number of Y-axes and the size of the printing paper, waveforms may not be printed.

Printing the waveform display screen

The waveform display screen can be printed only when the waveform display screen is active. When the same screen has 10 or more Y-axes in case of waveform printing, the axes from the tenth one on are not printed.
When the cursor values and the calculation results reach one half of the height of the printing paper, the cursor values and the calculation results are not printed on the same page as the waveform, but on a different page.
If the displayed waveform is a single continuous data, headers are added. For information on header information, see “Headers when printing” in this section.

Printing digital values

Headers are added before printing. For single batches, the same headers are added as for waveforms. If printing extends for multiple pages, headers are added to all pages.
The restriction on printing digital values is up to 5 million data.
If 5 million data are exceeded, the print preview and print menus are disabled.

Mark/message list printing

Mark/message printing is possible only when the alarm list and mark/message window are active and marks/messages are displayed. The print range is the cursor range or the entire range.
For single batches, the same headers are added as for waveforms. If printing extends for multiple pages, headers are added to all pages.

Alarm list printing

Alarm list printing is possible when the alarm list and mark/message window are active and an alarm tab is displayed. The print range is the cursor range or the entire range.
For single batches, the same headers are added as for waveforms. If printing extends for multiple pages, headers are added to all pages.

Printing of calculation results and cursor values

Calculation results and cursor values can be printed only when the waveform display screen is active and the calculation results dialog box is displayed.
When the cursor values and the calculation results reach one half of the height of the printing paper, the cursor values and the calculation results are not printed on the same page as the waveform, but on a different page.

Headers when printing

DX/DXAdvanced/MVAdvanced print headers

Graph name:	
Batch name: Batch No+Lot No.	
File message:	
Instrument name:	Serial No.:
Instrument type:	Acquisition interval:
Start time:	Start Cond.:
Stop time:	End Cond.:
Time Correction:	Data Count:
Range:	
Comment:	

Print preview

Procedure

The print layout can be seen before printing.

1. Select **File > Print preview** from the menu bar or click the **"Preview"** icon.

The preview screen is displayed.

2. Confirm the print layout.

Note

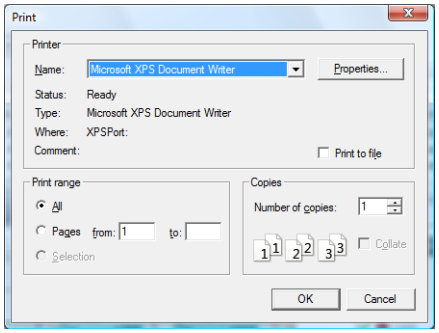
- The print image for the specified range is displayed on the preview screen.
- See the instruction manual of the used system for the print preview operation.

Printing

Procedure

1. Select **File > Print** from the menu bar or click the **"Print"** icon.

The "Print" dialog box is displayed.



2. Click the **[OK]** button after setting the printer, the print range, and the number of copies.

4.11 Handling of Data for which the Time has been Changed

When the time of data has been changed, handling is performed as the same tag and handling as a different tag is done at the time change point. Channel names, tag names, and tag designations are displayed on the waveform display screen with consecutive numbers added.

5.1 Messages and Handling Methods

Messages may be displayed on the screen during use. The contents and the handling methods are explained in the following.

No.	Display contents	Explanation
M10001	The graph has been changed. Save?	Confirm whether the changed graph is to be saved or not.
M10002	Delete “delete data” completly? Once deleted, restoring is not possible.	Confirm whether all files in Deleted data may be deleted from under management or not.
M10003	Delete graph?	This is the confirmation message for graph deletion. Graphs are not moved to Deleted data.
M10004	Delete instrument. OK?	This is the confirmation message for deletion of a device or a device group.
M10005	Normal exit has been made.	Backup or restore of the management area, a consistency check or reconstruction has been completed normally.
M10006	Switch management area. OK?	The management area is switched from the presently used one to a different management area.
M10007	Delete management area. OK? Search information and all imported files will be deleted.	All imported files, the index information, the device information, the graph information, etc. all are deleted and restoring is not possible.
M10008	A consistency check will be performed. OK? This processing may require some time.	No other operations are possible during a consistency check. Depending on the number of imported files etc., some time may be required.
M10009	Automatic import is cancelled during display and editing of the management area. OK?	All automatic imports are cancelled while the management area editing dialog box is displayed.
M10010	Delete all marks in the selected range. OK?	Confirm that all marks in the range specified by the cursors are deleted.
M10011	A file with the same name exists. Overwrite?	This is displayed when there is a file with the same name at the time of file export, Excel conversion or text conversion.
M10013	A graph with the same name exists. Overwrite?	A caution note that a saved graph already exists.
M10014	A search condition with the same name exists. Overwrite?	A caution note that saved search conditions already exist.
M10015	Rebuilding will be done. OK? Rebuilding may require some time.	No operation is possible during reconstruction. Depending on the number of imported files etc., some time may be required.
M10016	This processing may require some time. OK?	Depending on the quantity, backup or restore of the management area may take time.
M10017	The processing has been aborted.	This indicates that the processing has been cancelled while restoring the management area, during a consistency check or during reconstruction.
M10018	Move to deleted data. OK?	Confirm that the selected files are moved to Deleted data.
M10019	Delete, OK?	This is a caution note displayed at the time of deletion of a graph or a search item.
M10020	Upgrade the management area. This process may require some time.	If the management area and software version differ due to software updates or other factors, rebuild the management area to ensure consistency.
M10021	The time axis compression rate has been adjusted.	If the restriction on contraction of the time axis is exceeded by adding data with a short acquisition interval to the display, the time axis is automatically expanded and adjusted to that it does not exceed the upper limit.

Warning messages

No.	Display contents	Explanation	Handling method
W10101	The management area has reached the limit. Please create a new management area.	The size of management area has reached the limit and no further files can be imported.	When a new management area is created from the management area editing dialog box and restoring has been performed, import becomes possible. However, the files imported to the previous management area are not in the new management area and are not displayed.

5.1 Messages and Handling Methods

No.	Display contents	Explanation	Handling method
W10102	The corresponding instruments have reached the upper limit.	As the number of devices which can be managed has reached the upper limit, no new device files can be imported.	When addition of a new device is desired, delete a device not requiring management (also delete from “Deleted data” in the navigation window) or create a new management area.
W10105	The upper limit of tags for which waveform display is possible has been exceeded. Additional display is not possible for a part.	As the upper limit for display in the same view is 100 tags, no further additional display is possible.	Display in a different view or display after deleting unnecessary tags. Files for which the time has been changed, handling as different tags is performed for each time change. Accordingly, as even one tag may be handled as multiple tasks, the upper limit may be exceeded. As an extreme example, a tag for which 99 time changes have been made is handled as 100 tags.
W10107	The hard disk does not have enough space to create backup data. Reserve space and then perform backup.	Backup requires free capacity for all imported files, for the management area, etc.	Secure free hard disk capacity.
W10108	The hard disk does not have enough space for management area rebuilding. Reserve space and then try again.	This is displayed when the capacity required for reconstruction could not be secured.	Secure free hard disk capacity.
W10109	Processing has been aborted. The incomplete data being processed cannot be used. Please discard them.	This is displayed when a user has requested cancellation during processing of the management area. For example, as the data during a backup are incomplete, they cannot be used for a restore.	Please discard the intermediate backup data.
W10110	There are files which cannot be deleted because they are being used as graphs.	This is displayed when deleting files saved as a graph.	For deletion, delete the respective graph and then delete the file.
W10111	The object instrument file does not exist.	This is displayed when there is no file for the object device of the search item to be saved.	It is recommended to also delete the search item.
W10112	Please close all waveform windows before displaying or editing the management area.	As important changes of the management area may be made at the time of display and editing of the management area, all waveform windows must be closed.	Perform editing of the management area after closing all waveform windows.
W10115	Duplicate name.	At the time of changing the name of a graph or a search condition, this is displayed when the same name already exists.	Change the name to a different one.
W10116	The upper limit of groups for which waveform display is possible has been exceeded. Additional display is not possible for a part.	The upper limit for display in a waveform window is 50 groups. Further display is not possible.	Display on a different waveform display screen or display after deleting the tags of not required groups.
W10117	Summer time and winter time cannot be set to the same time.	–	Set summer time and standard time to different times.
W10118	No more tags can be added, because the number of displayed tags has reached its limit.	No more can be added because the limit to how many can be displayed on the same graph has been reached. Display them on another graph, or delete unneeded tags.	If you attempt to add tags and reach the upper limit, see W10105.
W10121	The Management area version is different. Please use the newest version.	Displayed when DAQManager is downloaded. DAQManager cannot be used.	Please use a new version of DAQManager.

Error messages

No.	Display contents	Explanation	Handling method
–	Insufficient memory.	Because it is an extremely large amount of data, the memory required to display it could not be secured.	Please implement the following. • Close the digital display window (the digital display requires a large amount of memory). • Close the waveform and list display windows. • Close other unnecessary applications. • If the data is extremely long, use DAQManager to delete old files and other files that you no longer need to view. • Expand the PC's memory.
E10201	Restoring of management area failed.	This is displayed when a folder other than the backup folder has been specified for management information or when the backup data are not normal.	Specify the folder to which the management information has been backed up.
E10202	File could not be opened.	This is displayed when there is no corresponding data file or when the file is broken.	Specify the corresponding data file or confirm that the file is not broken.
E10203	Too many files have been selected.	Even when the number of selected files is small, the full file path can exceed the limit in case of a deep folder hierarchy and a long full file path.	Reduce the number of files or import the entire folder with folder import operation.
E10204	This folder cannot be selected.	Displayed if a folder, system folder, or program folder in which DAQManager is installed is selected, or if a folder in which DAQManager is installed is specified as an export folder.	Specify a folder other than those listed on the left as an import or export folder.
E10205	This folder already has been selected.	This is displayed when an already specified watch folder is selected.	Select a different folder.
E10206	An error has occurred during processing.	An error has occurred during editing processing of the management area.	Check if the folder is set as Read only or if the free capacity of the drive is not sufficient.
E10207	The entered license number is not correct. Please enter again.	This is displayed when the entered license number is not correct.	Please enter a correct license number.
E10208	Backup of the management area has failed.	An error has occurred during backup processing of the management area.	Confirm that the free capacity of the hard disk is sufficient and that the access right is suitable. Also perform a consistency check for the management area from the management area editing screen.
E10209	Consistency check for the management area has failed.	An error has occurred during consistency check processing of the management area.	Check if the folder is set as Read only or if the free capacity of the drive is not sufficient.
E10210	Rebuilding of the management area has failed.	An error has occurred during reconstruction processing of the management area.	Check if the folder is set as Read only or if the free capacity of the drive is not sufficient.
E10211	The management area has been destroyed.	This is displayed when it has become clear that the management area has become broken.	Check the management area and perform reconstruction.
E10212	The waveform cannot be displayed. The index or files of the management area may have been destroyed.	This is displayed when a file has become broken after import, when the consistency of graph data is lost, etc.	Check the management area and perform reconstruction. In this case, the broken file is handled as not having been imported. If this message is displayed at the time of graph display, delete the respective graph.
E10213	The file could not be created.	This is displayed when file creation was not possible with export or conversion operation.	Confirm that the free capacity of the hard disk is sufficient and that the access right is suitable.
E10214	There is not sufficient memory.	This is displayed when processing has not been performed because of insufficient memory.	Check the remaining memory of the personal computer.
E10215	Import has been aborted because of insufficient hard disk capacity.	This is displayed when the hard disk capacity has become insufficient during import.	Check the hard disk capacity.

No.	Display contents	Explanation	Handling method
E10216	Access to the management area was not possible.	This is displayed when access to the management area was not possible.	Check access restrictions to the management area.
E10217	A fatal error has occurred. Restart the application.	This is displayed when operation has become impossible.	Please restart DAQManager.
E10218	An error has occurred during conversion processing.	This is displayed when an error has occurred because of some cause during conversion.	Check the attribute of the folder of the file to be converted, the hard disk capacity, etc.
E10219	File export failed.	This is displayed when an error has occurred because of some reason at the time of file export.	Check the attribute of the folder of the file, the hard disk capacity, etc.
E10220	Processing has failed.	This is displayed when an unexpected error has occurred.	Please contact your dealer.

5.2 Displaying a Log File

Log files are created at the time of file or folder import.
When a file which should have been imported is not displayed, the reason why it was not imported is listed.

Log files are at the following location.
<InstallDrive>\Yokogawa Electric Corporation\DAQManager\LOG
<InstallDrive> : Name of the directory where DAQManager is installed

Log file name :import_YYYYMMDD.log
YYYY : Four-digit year
MM : Month
DD : Day

File format: Date and time, No., contents, file name

Log comment list

No.	Display contents	Explanation
E[10302]	IMPORT ERROR [IMPORTED ALREADY] FILE=	A file with the same contents already has been imported.
E[10303]	IMPORT ERROR [INVALID FILE] FILE=	Invalid file
E[10304]	IMPORT ERROR [CRC ERROR] FILE=	CRC error file
E[10305]	IMPORT ERROR [COPY ERROR] FILE=	Copy to the management area has failed.
E[10306]	IMPORT ERROR [OPEN ERROR] FILE=	File opening has failed.
E[10307]	IMPORT ERROR [EXCEPTION] FILE=	An exception has occurred during file reading.
E[10308]	IMPORT ERROR [INVALID CHANNEL] FILE=	Invalid channel
E[10318]	IMPORT ERROR [LIMIT INDEX FILE]	The upper limit of the management area has been reached.
E[10319]	IMPORT ERROR [LIMIT INSTRUMENTS] FILE=	The upper limit for the recorder number which can be managed has been reached.
E[10320]	IMPORT ERROR [DISK FULL]	No free hard disk capacity.
E[10321]	IMPORT ERROR [SHARE VIOLATION]	This becomes an object for the next import because of being used by another process.
E[10322]	IMPORT ERROR [ERROR] FILE=	Import is not possible for some reason.
E[10327]	CONVERT ERROR FILE=	Conversion failed
I[10301]	IMPORT FILE=	Import was successful.
I[10309]	UPDATE FILE=	A deleted file has been imported by manual import.
I[10310]	DELETE FILE=	A file has been deleted completely.
I[10311]	START DELETE	File deletion start
I[10312]	FINISH DELETE	File deletion has been finished.
I[10313]	START MANUAL IMPORT	Manual import start
I[10314]	START AUTOMATIC IMPORT	Automatic import start
I[10315]	START FILE OPEN IMPORT	Import has started by file opening.
I[10316]	FINISH IMPORT	Import has been finished.
I[10317]	DISTURB IMPORT	Import processing has been aborted.
I[10323]	TRASH : FILE=	The file has been placed into the Recycle Bin.
I[10324]	REVERSE : FILE=	The file has been restored from the Recycle Bin.
I[10326]	CONVERT FILE=	Conversion successful

5.3 DAQManager Restrictions and Caution Items

Upper limit for the index size for the management area

The upper limit for the index size is 2 Gbyte. Approximately 100,000 files can be handled with an index file of 2 Gbyte. However, the number of files which can be handled changes according to the number of alarms etc. The index size can be confirmed on the management area edit screen.

Upper limit for the number of devices

The upper limit for the number of devices which can be handled by one index file is 300.

Displayable tags

The upper limit for tags which can be displayed with the same waveform screen or a graph is 100.

Handling of files with a time change

Files with a time change are handled as different tags.

Restrictions when the tag name has been changed during registration

The newest tag name in the imported file is used.

Handling of graphs when a tag name has been changed during registration

When the tag name of a configuration tag of a file saved by DAQManager has changed, change is made to the most recent tag name.

Restrictions when the group configuration has changed during registration

The most recent group information and group name in the imported file are used.

Message handling

The most recent group information of the group to which the message has been written is used.

Handling of files with a CRC error

DAQManager cannot import or open files with a CRC error. The viewer function of the DAQSTANDARD software can be used.

Display cases with list display

The maximum number of cases for list display is 100,000. However, Data including 100,000 cases or more are included at the time of search and sorting.

Number of data points on the waveform display

If the number of data points on the waveform display exceeds approximately 2 billion (precisely, 2,147,483,647) consecutive data points, the waveforms will not be displayed properly. If the scan interval is 1 s, this number of consecutive data points is acquired in approximately 68 years. If the scan interval is 25 ms, this number of consecutive data points is acquired in approximately 1.7 years. If the number of consecutive data points exceeds this limit, to display waveforms properly, files can be deleted from the oldest file so that the number of data points on the waveform display is kept within this upper limit.

Power-save settings

Set the PC so that it will not enter power-save mode while you are using DAQManager. If the PC enters power-save mode while files are being imported, inconsistencies will arise in the file management area. If this problem occurs, reconstruct the file management area.

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